

AMERICAN SOCIETY OF CIVIL ENGINEERS

INSTITUTED 1852

APPLICATIONS FOR ADMISSION AND FOR TRANSFER

The Constitution provides that the Board of Direction shall elect or reject all applicants for *Admission* or for *Transfer*, and, in order to determine justly the eligibility of each candidate, the Board must depend largely upon the Membership for information.

This list is issued to members in every grade for the purpose of securing all such available information, and every member is urged to scan carefully each monthly list of candidates and to furnish the Board with data in regard to any applicant which may aid in determining his eligibility. It is the *Duty* of all *Members* to the *Profession* to assist the Board in this manner.

It is especially urged, in communications concerning applicants, that errors in the record be pointed out and a *Definite Recommendation as to the Proper Grading in Each Case* be given, inasmuch as the grading must be based upon the opinions of those who know the applicant personally, as well as upon the nature and extent of his professional experience. If facts exist derogatory to the personal character or to the professional reputation of an applicant, they should be promptly communicated to the Board. *Communications Relating to Applicants are considered by the Board as Strictly Confidential.*

The Board of Direction will not consider the applications herein contained from residents of North America until the expiration of thirty (30) days, and from Non-Residents of North America until the expiration of ninety (90) days from April 1, 1924.

MINIMUM REQUIREMENTS FOR ADMISSION

Grade	General Requirement	Age	Length of Active Practice	Responsible charge of work
Member	Qualified to design as well as to direct work	30 years	10 years*	5 years
Associate Member	Qualified to direct work	25 years	6 years*	1 year
Junior	Qualified for sub-professional work	18 years†	2 years*	
Affiliate	Qualified by scientific acquirements or practical experience to co-operate with engineers			
Fellow	Contributor to the permanent funds of the Society			

* Graduation from a school of engineering of recognized reputation is equivalent to 2 years' active practice.

† Membership ceases at age of 32 unless transferred to higher grade.

AMERICAN SOCIETY OF CIVIL ENGINEERS

LIST OF APPLICANTS.

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The fact that applicants give the names of certain members as references does not necessarily mean that such members endorse.

The numbers to the left of each record indicate the serial number of the applicant for the current year, and the district in which he resides.

The note in heavy type represents, in each case, the estimate of the Applicant of the time he has spent in Active Practice, Sub-Professional work, Professional work, Responsible Charge, and in Designing. These figures do not include the allowance of two years for graduation, nor one-third of a year for each academic year successfully completed in an engineering college without graduation.

FOR ADMISSION

AMMERMAN, HUE TURNER—Salem, Va.—(Age 30. Born Lewistown, Mo.)—1½ years student, Potter Coll., Bowling Green, Ky.: Jan. 1913 to April 1914 Rodman and Concrete Inspector, Louisville & Nashville R. R., set ballast stakes and ran transit: April 1914 to Feb. 1915 Rodman, Topographer, Levelman and Draftsman, Nashville, Chattanooga & St. Louis R. R.: Feb. to April 1915 Transitman on highway location with J. C. Walker, Tuscaloosa, Ala.: April to July 1915 Asst. County Engr., Harlan County, Ky., in charge of location and plans: July 1915 to July 1916 and Dec. 1916 to Aug. 1917 Asst. County Engr., Bell County, Ky., in charge of field work: July to Dec. 1916 Asst. County Engr., Wise County, Ky.: Aug. to Oct. 1917 County Engr., Whitley County, Ky.: Oct. to Dec. 1917 Res. Engr., Virginia State Highway Comm., on construction and maintenance: Dec. 1917 to June 1919 with 23d Engrs., U. S. Army, from Sept. to Nov. 1918 in charge of building ammunition dumps, railroad and macadam roads: July 1919 to March 1920 County Engr., Pittsylvania County, Va., on location, construction and maintenance of county and state roads (employed by both County and State): March to Oct. 1920 Project Engr., Virginia State Highway Comm., on location and heavy construction: Oct. 1920 to Jan. 1921 Highway Engr., Howard Constr. Co., Nashville, Tenn.: Jan. 1921 to April 1922 Res. Engr., Virginia State Highway Comm., Staunton Residency (19 counties), state aid location, construction and maintenance: April 1922 to date Dist. Engr., Virginia State Highway Comm., Salem Dist. (**Active practice 11.2 years: Res. Ch. 5.4.**) Refers to J. C. Carpenter, W. F. Day, A. C. Dunn, T. Ellett, W. R. Glidden, W. W. McClevey, J. G. Tabler.

ANDERSON, JOHN PAUL—1716 Seventh St., Perry, Iowa—(Age 29. Born Perry, Iowa.) (B. S. in M. E., Iowa State Coll., 1916.)—June 1916 to Sept. 1917 with Phoenix Utility Co., about 1 month as Night Timekeeper in charge of office on night shift, at Omaha, Nebr.; 7 months Cost Clerk, made out reports and kept detailed cost data, power (7) plant construction, and 6 months Field Engr. at Wichita, Kans., in charge of engineering on 10 000-kw. extension to steam power plant: Sept. 1917 to July 1919 Private, Corporal and (after May 1918) 2d Lieut., U. S. Army, 1 year with 6th U. S. Engrs., 3d Div., in France; Sept. 1919 to April 1920 with Phoenix Utility Co., 5½ months as Res. Engr. at Wichita, in charge of field and office engineering connected with construction of 10 000-kw. extension to steam electric station, and 2 months Asst. Supt., Constr., at Omaha, in charge of night shift on 15 000-kw. extension to steam electric station: April to Nov. 1920 Ill. Nov. 1920 to April 1921 Field Engr., Chino Copper Co., Hurley, N. Mex., in charge of outside engineering work and surveying, last 2 months in office on design for new section of copper mill: April to Sept. 1921 Project Engr., New Mexico State Highway Comm., Socorro, N. Mex., in charge of Federal Aid project, 10 miles of hard surfaced road construction along Rio Grande River: Sept. 1921 to Sept. 1922 Res. Engr., Texas Constr. Co., Ft. Worth, Tex., in charge of field and office engineering connected with construction of 20 000-kw. extension to Ft. Worth Power & Light Co.'s steam electric station: Sept. 1922 to April 1923 Field Supt., Elec. Bond & Share Co., Oswego, Kans., in charge of coal prospecting project, drilled approx. 6 000 acres of land, had charge of office and field work: April 1923 to date Asst. Supt., Constr., Phoenix Utility Co., Parsons, Kans., in charge of construction Neosho Steam Station (ultimate capacity 60 000 kw., condensing water system built for 60 000 kw. capacity).

turbine room, present construction 30,000 kw., one 15,000-kw. machine installed). (Active practice 6.9 years: Res. Ch. 4.5: Design 0.5). Refers to T. R. Agg, R. J. Bassett, P. F. Critz, H. R. Hunter, C. S. Nichols.

ANDERSON, VALENTINE—28 E. 129th St., New York City—(Age 40. Born New York City.)—Aug. 1902 to Nov. 1904 Rodman and Instrumentman, Eng. Dept., New Rochelle, N. Y.; Nov. 1904 to Jan. 1909 Rodman and Instrumentman (1 year) and Inspector of construction (3½ years), Constr. Dept., New York, New Haven & Hartford R. R.; April 1909 to Jan. 1910 Transitman, American Real Estate Co., land development; April 1910 to Oct. 1912 Confidential Inspector, Dept. of Docks and Ferries, New York City, inspecting efficiency of personnel and plant; Nov. 1912 to Feb. 1913 Gen. Foreman, Underpinning Co., New York City; March to June 1913 Surveyor, land development, golf course, etc., with W. L. Hayes, Civ. Engr. and Surveyor, New Rochelle; June to Oct. 1913 Asst. Engr., Board of Water Supply, New York City, reservoir construction; Oct. 1913 to Sept. 1917 Jun. Engr., Public Service Comm., subway construction, 1 year Acting Sec. Engr.; Sept. 1917 to Jan. 1918 Asst. Field Engr. for MacArthur Bros., Contrs., building camps and army bases; Jan. 1918 to Aug. 1919 Capt., Engrs., U. S. Army; Student Officer; Commanding Officer of Engr. Troops and operations in United States and France; Aug. 1919 to May 1922 Jun. Engr., and May 1922 to date Asst. Engr., Transit Comm., New York City. (Active practice 20.9 years: Sub-Prof. work 9.8: Prof. work 11.1: Res. Ch. 4.1). Refers to R. M. Merriman, H. P. Michener, B. L. Rees, R. S. Saunders, W. L. Selmer, W. F. Stevenson.

AUSFAHL, FRED KING—P. O. Box 386, Clarkdale, Ariz.—(Age 36. Born Peru, Ind.) (B. S. in Civ. Eng., Purdue Univ., 1913.)—June 1905 to March 1906 Timekeeper and 291 Rodman, National Bridge Co., Peru, Ind.; March to Sept. 1906 Rodman, and June to Dec. 1907 Draftsman and Leveler, Winona Interurban Ry. Co.; April to Sept. 1908 (11) Transitman, Indianapolis & South Bend Ry. Co.; Aug. to Oct. 1909 Chairman and Levelman, U. S. Army Engrs. Oct. 1909 to Sept. 1911 with Idaho Irrigation Co., until March 1910 as Draftsman on design and construction of 80,000-acre irrigation project near Richfield, Idaho; then Draftsman on water rights investigations of Big and Little Wood Rivers; and after March 1911 Transitman in charge of party on surveys; June to Sept. 1912 Gen. Foreman, Indiana Mfg. Co., Peru, Ind., in charge of wrecking and reclaiming material from seven old factory buildings; June to Aug. 1913 Draftsman, Idaho Irrigation Co., Richfield; Aug. 1913 to June 1914 Draftsman and Designer, California Portland Cement Co., Colton, Cal., on plant extensions, including crushing, elevating and conveying machinery, kilns, dust collector, steel mill buildings, and large reinforced concrete structures; June to Dec. 1914 Res. Engr., Washington State Highway Dept., Enumclaw, Wash., in charge of force account camp surfacing (about 6 miles), building bridges and operating quarry; the Engr. Party, and about 9 miles of clearing, grading, etc., under contract, on McClellan Pass Highway; March to Dec. 1915 Supt. of Constr. for same Dept., Enumclaw and North Bend, Wash., in charge of state force account camps, building bridges and surfacing McClellan Pass and Sunset Highways (about 21 miles); Jan. 1916 to April 1917 Designer, Squad Boss and Office Engr., United Verde Copper Co., at Clarkdale, Ariz., on design of crushing plant, sewers, roads, mill buildings, plant extensions, and miscellaneous structures and equipment; May to June 1917 Designer of structural steel mill buildings, Utah Copper Co., Salt Lake City, Utah; June 1917 to date with United Verde Copper Co. and subsidiary companies, Clarkdale, Ariz., until July 1920 as Chf. Draftsman (including 3 months Constr. Engr.) in charge of drafting office, on design of powdered coal plant (500 tons per day), concreted ore-hoisting shaft and equipment, 125-man hoisting shaft and equipment, extensions to converter, reverberatory, boiler, and roasting plants, shops, railways, and numerous miscellaneous structures and equipment (aggregating approx. \$4,000,000); since July 1920 Asst. Chf. Engr. in general charge of design and construction in absence of Chf. Engr. and in direct charge of all cost finding, estimates, contracts, and specifications for machinery, materials, equipment, labor, etc., covering water-softening plants, shops, Cottrell smoke treating plant, 500-ton per hour crushing and screening plant, roundhouse, two 20,000-cu. ft. blowing engines, 6,000-kw. turbo-generator plant, concrete tile plant, converter plant extension, condensing plant, 420-ft. brick chimney, roads, bridges, and numerous smaller structures and equipment (aggregate approx. \$5,000,000); licensed to practice Mech. and Civ. Eng. in Arizona. (Active practice 14.3 years: Sub-Prof. work 4.4: Prof. work 9.9: Res. Ch. 8.9: Design 8.8). Refers to F. R. Goodman, W. K. Hatt, M. R. Kays, T. Maddock, R. L. Sackett, R. L. Silver, R. J. Swart.

BLACK, WILLIAM MADISON, Jr.—Care, California Oregon Power Co., Medford, Ore.—(Age 23. Born Salinas, Cal.) (A. B., Stanford Univ., 1923.)—June to Oct. 1922
292 Draftsman, Southern Pacific Co.: July 1923 to date Transitman, California Oregon Power Co. (Active practice 0.9 year). Refers to R. G. Hackett, C. D. Marx, C. Moser,
(12) J. F. Partridge, C. B. Wing.

BOSTWICK, NORRIS—1535 West 30th St., Los Angeles, Cal.—(Age 33. Born San Diego, Cal.) (B. S. in Civ. Eng., Univ. of Southern Cal., 1913.)—July 1913 to Dec. 1915
293 Chainman and Instrumentman, U. S. Indian Service (Irrigation), Chiloquin, Ore., on survey and construction, Modoc Point Project; acted as Hydrographer for Klamath
(11) Reservation: Feb. to June 1916 Graduate Student, Eng. Dept., Univ. of Southern California: June 1916 to Sept. 1917 Instrumentman, U. S. Indian Service (Irrigation), Draftsman on design and Chf. of Party on surveys and construction of Agency Project: Sept. 1917 to Aug. 1918 Chf. of Party, Ochoco Irrigation Dist., Prineville, Ore., located lateral distribution system on 18 000 acres: Aug. 1918 to Aug. 1919 with U. S. Army; 8 months overseas; Sergeant in charge of bending and placing steel at Pershing Stadium near Paris (May–June 1919): Aug. 1919 to Jan. 1920 Draftsman, U. S. Indian (Irrigation) Service, Los Angeles, Cal., design of 50-ton Stoney gates for Colorado River Project: Jan. to Oct. 1920 Asst. Engr. with H. W. Hincks, Civ. Engr., Los Angeles, design of irrigation systems and general private practice: Oct. 1920 to Sept. 1922 Asst. Engr., U. S. Reclamation Service, Denver, Colo., design of power and pumping plants, high-pressure reservoir outlets and balanced needle valves for Shoshone, Tieton, North Platte and other projects: Sept. 1922 to May 1923 Emergency Jun. Engr., Bureau of Power and Light, Los Angeles, made special studies of power development plans on large streams in Sierra Nevada Mts.: May to Sept. 1923 Engr. with Sonderegger & Hincks, Cons. Engrs., Los Angeles, acted as Designing Engr. for Arizona Eng. Comm. report on Arizona land irrigable from the Colorado River (total estimated cost nearly \$500 000 000): Sept. 1923 to date Office Engr., Flintridge Co., Pasadena, Cal., in charge of drafting room on subdivision and improvement of high class residential property. (Active practice 10.5 years: Res. Ch. 3: Design 4). Refers to A. R. Arledge, W. E. Blomgren, F. G. Dessery, H. W. Hincks, W. E. Jessup, T. R. Mini, J. L. Savage.

BOWLER, EDMOND WESLEY—Univ. of New Hampshire, Durham, N. H.—(Age 32. Born Dedham, Mass.) (S. B., Mass. Inst. Tech., 1914.)—Sept. 1914 to June 1915 Asst. to
294 Professors Spofford and Russell, correction of class work, higher student, teaching, and Dec. 1916 to May 1917 Research Asst., Elec. Dept., research and study, Massachusetts
(2) Inst. of Technology: June to Oct. 1913, June to Sept. 1914, and June 1915 to Dec. 1916 Jun. Topographer, U. S. Geological Survey, on military map work acting as Controlman, Transitman, Levelman and Sketcher: May 1917 to Feb. 1919 2d Lieut. and 1st Lieut., 3d Regt. Engrs., U. S. Army, Panama Canal Zone, Section Leader (6 months), Co. Commander (2 months), Regt. Adj. (1 month) and Topographical Inspector in charge of military mapping (5 months), etc.: Feb. 1919 to Aug. 1920 with U. S. Industrial Alcohol Co., assisting in preparing defense of lawsuits arising from collapse of molasses tank in Boston: Sept. 1920 to date Asst. Prof. of Mathematics, Univ. of New Hampshire, in charge of courses in surveying and also roads. (Active practice 9.7 years: Sub-Prof. work 2.3: Prof. work 7.5: Res. Ch. 5.1). Refers to C. B. Breed, J. W. Howard, D. Porter, C. M. Spofford, G. F. Swain.

BROUGHTON, CHARLES THOMAS—6538 Tremont St., Oakland, Cal.—(Age 40. Born Santa Barbara, Cal.)—July 1901 to Jan. 1903 Chainman, Rodman and Transitman with
295 City Engr., Santa Barbara, Cal.: Jan. 1903 to July 1904 Estimator, Southern Pacific Co., Lucin Cut-off: July 1904 to July 1905 Transitman, general land surveys, L. Friel,
(13) Los Angeles: July 1905 to Dec. 1906 Transitman, Southern Pacific Co. location, in eastern Oregon: Dec. 1906 to Nov. 1908 general surveying for Hugh Donegan, San Francisco: Nov. 1908 to Dec. 1909 Res. Engr. and Asst. Gen. Supt., construction of Palace Hotel, San Francisco: Dec. 1909 to Nov. 1910 general engineering in San Francisco, Punnett & Broughton: Nov. 1910 to Dec. 1911 Asst. Engr., Southern Pacific Co., Res. Engr. on 40 miles of double tracking of main line in Nevada: Dec. 1911 to Sept. 1913 Asst. Engr., Spring Valley Water Co., property surveys, location of 11 miles of railroad and general water-works surveying: Sept. 1913 to Feb. 1915 Chf. Engr., in charge of location, report and construction of railroad from Sheridan to Dairfarm Mine (10 miles) in Placer County, Cal., for Selby Smelting & Lead Co., San Francisco: April to Dec. 1915 Field Boss, Alaska Eng. Comm., Div. No. 3, in charge of preliminary surveys and location: Feb. to July 1916 in charge of preliminary sur-

- veys and report on proposed railroad (18 miles) for Calaveras (Cal.) Copper Co., Sept. 1916 to Aug. 1918 Div. Engr., Marin Municipal Water Dist., in charge of construction of 9 000-ft. water tunnel, 7 miles of 24-in. concrete pipe and concrete trestles; Aug. 1918 to date Asst. Engr. in charge of investigation of water supplies and underground waters, construction of water and irrigation works, including dams, pipe lines and pumping plants, under direction of Cyril Williams, Jr., Cons. Engr. (Active practice 22.3 years: Sub-Prof. work 8.6: Prof. work 13.7: Res. Ch. 13.7). Refers to A. J. Cleary, R. H. Jamison, J. B. Pope, D. S. Stoner, R. J. Weir, C. Williams, Jr.
- BROWN, JULIUS DEWITT**—Anthony Co., Streator, Ill.—(Age 29. Born Ocala, Fla.) (C. E., Valparaiso Univ., 1916.)—Jan. to May 1917 Asst. Engr. with E. W. Sproul, 296 general engineering work and charge of laying out around buildings; reinforced concrete: May 1917 to Nov. 1919 with U. S. Army, as 1st Lieut., 307th Engrs. (May 1917 (8) to Sept. 1918), general construction work in United States and in France; Capt., Engrs. (Sept. 1918 to Nov. 1919), charge construction work under Col. R. Park, Camp Humphreys, Va., until June 1919, and at Univ. of Kansas, Prof. of Military Science and Tactics Engr. until Sept. 1919: Nov. 1919 to Feb. 1920 Engr. with C. V. Craig, mine surveying, construction and assaying: Feb. to March 1920 Surveyor with W. C. Lacy, County Engr., Yuma, Ariz., preliminary surveying for highway: March 1920 to April 1921 Supt. Constr. with B. E. Baer, charge of building construction, reinforced concrete, brick and steel: April to Sept. 1921 Project Engr., Indiana State Highway Comm., engineering and road construction: Sept. 1921 to Feb. 1922 Supt. Constr. with J. B. Goodall, building construction, reinforced concrete, brick and steel: Feb. to Sept. 1922 Supt. Constr., Madison Constr. Co., road construction, concrete: Sept. 1922 to May 1923 Supt. Constr., Hunt Bros., general building and estimating: May 1923 to date Sales Engr., Anthony Co. (Active practice 6.4 years: Prof. work 6.4: Res. Ch. 5.8). Refers to B. E. Baer, J. T. Hallett, F. Kellam, B. R. McBride, J. S. Neibert.
- CHASE, ROLLAND WHITFIELD**—133 West 126th St., New York City—(Age 24. Born Bellwood, Pa.) (B. S. in C. E., Lafayette Coll., 1922.)—June to Sept. 1920 Rodman, 297 Pennsylvania R. R.: Transitman and Levelman, etc.: Oct. 1922 to July 1923 Instructor, American Univ., Beirut, Syria, taught surveying, water supply and sewerage and applied (1) mechanics; designed small hospital buildings and sewage-disposal plant for orphanage: Oct. 1923 to March 1924 Draftsman, Export Dept., The Texas Co., drawing and tracing, general layouts of stations, piers, house plans, tanks and pipe-lines, etc., design, houses, filling stations, piers. (Active practice 1.2 years: Sub-Prof. work 1.2: Design 0.2). Refers to F. O. Dufour, W. S. Lohr, L. Perry, H. T. Spengler, J. B. Stobo.
- COOK, FRANK LOUIS**—338 Rialto Bldg., San Francisco, Cal.—(Age 41. Born Chicago, Ill.) (B. Sc., Univ. of Ill., 1908.)—1908 to 1910 (2 years) Asst. Dist. Supt., Public 298 Service Co. of Northern Illinois, on design, construction and management work on public utilities: 1910 to date with Chicago Bridge & Iron Works, Steel Tank and Structural (13) Bldrs., since Dec. 1920 Pacific Coast Sales Mgr., on design, sales and construction work. (Active practice 15 years: Prof. work 15: Res. Ch. 5: Design 0.5). Refers to G. T. Horton, R. W. Lawton, M. N. Lebedeff, R. J. Reed, F. G. White.
- CRAIG, WALLACE DEWEY**—3130 Lafayette Ave., Omaha, Nebr.—(Age 25. Born Omaha, Nebr.) (B. Sc. in C. E., Univ. of Nebr., 1923.)—June to Oct. 1914 Rodman, City of 299 Calgary, Alberta, Canada: June 1915 to Jan. 1916 Rodman, Canadian National R. R.: June to Sept. 1917 Rodman, U. S. Govt., Ft. Omaha, Nebr., cantonnement construction: (14) June to Sept. 1918 Chf. Checker, appraisal, Omaha Gas Plant, check on records and measurements: June to Sept. 1921 Rodman and Asst. Hydrographer, Canadian Pacific R. R., Dept. of Natural Resources: June to Oct. 1922 Inspector, Douglas County (Nebr.) highways, paving: June 1923–Jan. 1924 Res. Engr. with Bruce & Grupe, Cons. Engrs., paving, Scribner, Nebr., sewer, drainage ditch and disposal plant, Plainview, Nebr.: Jan. 1924 to date Engr. and Draftsman, Metropolitan Utilities Dist., Omaha, Nebr., water and gas construction. (Active practice 2.2 years: Res. Ch. 0.7). Refers to J. A. Bruce, G. L. Campen, M. I. Evinger, E. Y. Grupe, Jr., H. V. Knouse, C. E. Mickey.
- DAVID, STANLEY CHARLES WILLIAM**—P. O. Box 1650, Auckland, New Zealand—(Age 27. Born Wellington, New Zealand.)—1914 to June 1917 (3 years) student, 300 Polytechnic Coll. of Eng., Oakland, Cal.: June 1917 to Feb. 1918 Asst. Engr., Boston Land Co. Irrigation Project, Huron, Cal., on surveys, construction of concrete pipe- (1) lines, deep well boring, structures, etc.: March 1918 to Aug. 1919 with 5th Battalion,

Canadian Engrs., in France and with Army of Occupation, on reconnaissance, roads, bridges, light railways, etc.: Aug. to Dec. 1919 Res. Engr.-in-Chg., canal construction, irrigation surveys, etc., Miller and Lux Corporation's Kern River Irrigation Project at Buttonwillow, Cal.: Jan. to May 1920 Asst. Engr., New Zealand Govt., Public Works Dept., on irrigation surveys and preliminary survey for proposed dam at Alexandra, Central Otago, New Zealand: May 1920 to Feb. 1922 Representative Engr. with Andersons, Ltd., Christchurch, New Zealand, on erection and installation, quarry plant, road construction, excavating contracts, etc., representing Osgood Steam Shovel Co. in New Zealand: March 1922 to Dec. 1923 Asst. Engr. with Cory-Wright & Salmon, Engrs., on hydro-electric plant, water purification, steel pipe-lines, drafting, estimating, erection, etc.; Contr. Engrs. to Govt. of New Zealand: Dec. 1923 to date First Asst. Engr. in charge of construction of hydro-electric scheme (capital voted \$500 000) for Borough of Tauranga, New Zealand, tunneling in rock, erection of dam and headworks. (Active practice 6.7 years: Sub-Prof. work 1.4: Prof. work 5.3: Res. Ch. 2.9: Design 0.7). Refers to E. Crow, F. Finch, C. A. Reed. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

DE DECKER, LUDOVIC FREDERIC MARIE—P. O. Box 458, Vernon, B. C., Canada—(Age 46. Born Antwerp, Belgium.) (Civ. and Min. Engr., Univ. of Louvain, Belgium, 1901: 301 Elec. Engr., Montefiore Inst., Elec. Coll. of Univ. of Liège, 1902.)—1903 and 1904 Chf. Engr. and Asst. Mgr., iron and silver mines, Compania Minera de Almagrera, Cuevas de (12) Vera, Prov. de Almería, Spain: 1905 to 1910 with Société de Travaux Publics du Caire (Cairo Public Works Co.), Brussels, Belgium, 2 years as Secy. and Chf. Engr., general contracting, building of new City of Heliopolis near Cairo, Egypt, and 3 years as Chf. Engr. and Asst. Mgr. in Cairo: 1911 to 1915 (4 years) and 1920 to date (3 years) Cons. Engr. at Vernon, B. C., Canada: 1916 to 1919 (3 years) with A. G. Kildston & Co. of Glasgow and London, at Montreal, managing their Australasian Dept., export and import of iron, steel, machinery, etc. (Active practice 17 years: Prof. work 17: Res. Ch. 10). (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

EASTMAN, ALBERT REYNER—23 Naples Rd., Brookline, Mass.—(Age 23. Born Woodstock, Ill.) (B. S., Univ. of Ill., 1923.)—June to Sept. 1919 Tracer, June to Sept. 1921 302 Draftsman, and June to Sept. 1922 Designing Draftsman, concrete and steel, with J. A. Barloga, Archt., Rockford, Ill.: June 1923 to date Draftsman with Stone & (2) Webster, Inc. (Active practice 0.8 year: Sub-Prof. work 0.8). Refers to I. O. Baker, M. L. Enger, L. H. Provine, F. T. Sheets, A. N. Talbot, W. M. Wilson.

ERICKSON, ROY JOHN AUGUST—6247 Pine St., Philadelphia, Pa.—(Age 23. Born Philadelphia, Pa.) (B. S. in C. E., Drexel Inst., 1923.)—June 1920 to Jan. 1921 Inspector, 303 Asst. to Field Engr., Reading Co., on construction of coal storage pier: June to Oct. 1922 Field Engr., Reading Co., on construction of creosoted pier and pier for a lumber (4) company in Philadelphia: Oct. 1923 to date Jun. Engr., general inspection on steel towers of bridge for Delaware River Bridge Joint Comm. (Active practice 0.8 year). Refers to M. B. Case, W. Easby, Jr., C. Elcock, M. D. Kolyn, H. W. Latta.

FENKELL, NEAL HARRIS—1615 Warwood Ave., Wheeling, W. Va.—(Age 25. Born Detroit, Mich.) (B. S. in C. E., Mich. Agri. Coll., 1921.)—June 1921 to Jan. 1922 and 304 April to June 1922 Asst. Engr., Gillespie Contr. Co., Detroit, Mich., 6 months on steel water mains for the city, checking material, levels, drawing up subsurface structures (6) and about one-half of time directing foreman laying cast-iron pipe; 2 months checking supplies and materials, running grades and various other details: June to Dec. 1922 Engr., T. A. Gillespie Co., at Bay City, Mich., on construction of intake line and suction well: Jan. to April 1923 Draftsman, Board of Water Commrs., Detroit, field sketching and office drafting: May to Nov. 1923 with T. A. Gillespie Co., New York City, as Asst. Engr. on steel pipe-lines. (Active practice 2.1 years: Sub-Prof. work 0.7: Prof. work 1.3: Res. Ch. 1.3). Refers to A. Ackenhell, C. Ashley, C. W. Hubbell, J. F. Laboon, W. M. Mitchell, F. H. Stephenson, F. S. Stow.

FISHER, MARTIN RANKIN—107 City Hall, Detroit, Mich.—(Age 39. Born Inkster, Mich.) (B. S. in C. E., Univ. of Mich., 1906.)—June to Nov. 1906 Asst. Engr., Riggs & 305 Sherman Co., Toledo, Ohio; Field Engr. in charge of construction of sewers and pavements at Van Buren, Ind.: Nov. 1906 to Jan. 1907 Instrumentman, Detroit River (7) Tunnel Co., Detroit, Mich.: Jan. 1907 to May 1909 Draftsman, Bridge Engr.'s office, Pere Marquette R. R. Co., Detroit: May 1909 to Jan. 1911 Asst. Engr., O. & W. R. R. Co.,

Seattle, Wash., in Bridge Dept., which handled designing of railroad bridges, also of reinforced concrete and steel bridges, retaining walls, etc., in building of Harriman Ry. Terminal at Seattle, Wash., on parts of this work, being responsible for computations for design and drawing up of design from rough sketches and general information furnished by the Bridge Engr.: Jan. 1911 to Jan. 1914 Draftsman, Jan. 1914 to Jan. 1916 Instrumentman, and Jan. 1916 to Aug. 1918 Chf. of field party, City Engr.'s office, Detroit: Aug. 1918 to Feb. 1919 Asst. Engr., Hull Fabrication Dept., A. I. S. C., Hog Island, Pa., being Asst. Chf. of Inspection Div., inspection of fabrication of structural steel in hulls of ships built at Hog Island: Feb. 1919 to date Engr. in Chg., Survey Div., City Engr.'s office, Detroit (division handles survey work for Dept. of Public Works and Dept. of Parks and Blvds., principally survey work on construction of sewers, pavements and grade separations); also supervising precise topographical survey of the city: Registered Civ. Engr., State of Michigan. (Active practice 17.7 years: Sub-Prof. work 7.9: Prof. work 9.8: Res. Ch. 8.1: Design 1.7). Refers to G. H. Fenkell, J. R. Hendry, C. W. Hubbell, R. H. McCormick, S. Murray, J. W. Reid, W. D. Shannon, J. Tuthill.

FISKE, HAROLD CHAMBERLAYNE—903 Oak St., Chattanooga, Tenn.—(Age 44. Born Jamestown, N. Y.) (U. S. Mil. Acad., 1903.)—Sept. 1903 to date with Corps of Engrs., 306 U. S. Army, as follows: Sept. 1903 to Dec. 1904 2d and 1st Lieut., repairs and extension of wharves at Jolo and Siasil, Philippine Islands, land survey and designs and (10) building concrete arch bridge, Jolo; Jan. 1905 to June 1906 with Engr. troops, post-graduate course, Engr. School, Washington Barracks; June to Oct. 1906 surveys for War Dept.; Oct. 1906 to Sept. 1907 surveys, detailed report on railroad bridges, supervising section of Obras Publicas, Cuba; Sept. 1907 to Aug. 1908 additional post-graduate work, Engr. School, military surveys, etc.; Sept. 1908 to Aug. 1912 Instructor and Asst. Prof., Dept. of Civ. and Mil. Eng., U. S. Military Academy, West Point; Capt., Corps of Engrs.; Sept. 1912 to Oct. 1915 Asst. Dist. Engr. and Dist. Engr., U. S. Engr. Office, Pittsburgh, Pa., river improvement; Oct. 1915 to June 1917 Dist. Engr., Vicksburg, Miss., river improvement; Major, Corps of Engrs.; June 1917 to Aug. 1919 war service, organizing and conducting School of Mil. Eng., charge building construction, Chf. Engr., 32d Div., Chf. Engr., 3d Army Corps; Lt. Col. and Col., Corps of Engrs.; since Sept. 1919 Dist. Engr., Chattanooga, Tenn., river improvement; Major, Corps of Engrs. (Active practice 20.4 years: Sub-Prof. work 0.5: Prof. work 19.9: Res. Ch. 15.5: Design 2). Refers to L. H. Beach, N. C. Grover, E. K. Hiles, C. Keller, W. C. Langfitt, A. B. McGrew, H. M. Marshall, G. H. Matthes, H. Taylor, M. C. Tyler, A. H. Van Cleve, D. H. Wood.

FITZGERALD, WILLIAM JOHN—424 E. 5th St., Duluth, Minn.—(Age 28. Born Duluth, Minn.) (B. S. in C. E., Univ. of Minn., 1920.)—June to Sept. 1916 Chairman, and 307 Aug. to Sept. 1919 Transitman, City of Duluth; July to Dec. 1917 and March to July 1919 Asst. Engr. in charge of surveys, Duluth Eng. Co.: Dec. 1917 to March 1919 (7) Sgt., 1st Class, 5th U. S. Engrs., U. S. Army, 8 months domestic service in regular company and 7 months foreign service in Topographical Corps, Headquarters Dept.: July to Sept. 1920 Draftsman, bridge design, Minneapolis, St. Paul & Sault Ste. Marie R. R. Co.: Sept. 1920 to Aug. 1921 member of firm, Fitzgerald Bldg. Corporation, sale of building materials and construction work, Lawrence, Mass.: Sept. 1921 to March 1922 Asst. Engr., drainage work, St. Louis County, Minn.: March 1922 to date Field Engr., City of Duluth, in charge of paving and construction work incidental thereto in the field, design of same in office. (Active practice 5.9 years: Res. Ch. 1.8: Design 1.1). Refers to L. Ayres, F. Bass, A. J. Bawden, J. Carson, E. K. Coe, A. S. Cutler, T. F. MacGilvray, R. M. Palmer, G. C. Staehle.

FORSBECK, CARL DAVIDSON—Red Oak, Iowa—(Age 40. Born Gray, Iowa.) (Bc. in C. E., Iowa State Coll., 1910.)—June to Sept. 1905 Chairman and Leveler, Des Moines, 308 Iowa Falls & Northern R. R.: June to Sept. 1906 land and drainage surveys, Audubon County, Iowa: Nov. 1906 to Jan. 1907 Pile Bridge Inspector, Ft. Dodge & Southern (7) Ry., Boone, Iowa: Jan. to Oct. 1907 Instrumentman, Chicago, Rock Island & Pacific Ry., Des Moines, Iowa: June to Nov. 1908 engineering work at Las Vegas, N. Mex., resurveying land, preliminary estimates on proposed 18 miles of railway, irrigation and platting, for various individuals: Nov. 1908 to July 1909 with Santa Fe Ry., San Marcial, N. Mex., as Rodman and Instrumentman, maintenance of way on about 800 miles of line; construction of mine spurs (about 2 miles) and yard and building construction: July to Dec. 1909 Topographer and Instrumentman, preliminary and

location, Arizona & Colorado Ry. (Southern Pacific): March to April 1910 Instrumentman, Union Pacific Ry.: April 1910 to June 1913 in private practice of engineering at Waterloo, Iowa; County Surveyor of Audubon County, Iowa, land and drainage surveys, bridge inspection; designed and supervised construction of Kimballton (Iowa) Water-Works; drafting and blueprinting: June 1913 to Jan. 1916 County Highway Engr. of Audubon County, and general engineering work; general supervision of highway and bridge work; checked design and inspected construction of 200 000-gal. reinforced concrete reservoir at Audubon, Iowa: Jan. 1916 to Jan. 1918 County Highway and Drainage Engr. of Montgomery County, Red Oak, Iowa, in charge of all road and bridge construction, surveyed and designed change for a new channel of West Nodaway River (about 9 miles long): Jan. 1918 to July 1919 with U. S. Army, Reserve Officers' Training Camp, as Capt. of 525th Engrs. in United States and in France, also in command of 525th Engrs. service of supplies and construction work, such as highways, road and building some railroad work: Aug. 1919 to Sept. 1922 County Highway and Drainage Engr., Montgomery County, also general engineering, general supervision of road and bridge construction: surveyed, designed and supervised construction of about 18 miles of open ditch work; designed and supervised construction of outlet sewer at Villisca, Iowa, also storm sewer at Red Oak, Iowa: Sept. 1922 to date City Mgr. of Red Oak, also Drainage Engr., has full charge of all departments in the city, including City Engr. and Water Commr.; designed and supervised construction of about 6 miles of pavement, water mains, sanitary and storm sewers and swimming pool. (Active practice 16 years: Prof. work 13.8: Res. Ch. 12.8: Design 2.3). Refers to T. R. Agg, C. H. Currie, F. C. French, C. N. Green, A. Marston, L. M. Martin, W. D. Maxwell, J. H. Mayne.

FOWLER, HOMER EDISON—482 Willow Ave., Pierre, S. Dak.—(Age 27. Born Heddlck, Ill.) (B. S. in C. E., Coll. of Eng., Univ. of S. Dak., 1921.)—June to Aug. 1918 Elec. 309 Tester, Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa., testing transformers: Dec. 1918 to March 1919 Rodman, Chicago, Milwaukee & St. Paul Ry. Co.: March (7) to Aug. 1919 Instrumentman and Draftsman, Atherly Eng. Co., Basin, Wyo.: June to Sept. 1920 Instrumentman, North Dakota State Highway Comm., Bismarck, N. Dak.: Sept. 1920 to June 1921 (while at school, nearly 3 months) on city additions and surveys for City Engr. and County Engr.: June 1921 to July 1923 with North Dakota State Highway Comm., Bismarck, until Sept. 1922 as Asst. Engr., Res. Engr. on construction during summer and office work during winter; then Asst. Div. Engr., office work and inspection trips, Acting Div. Engr. during absence of Div. Engr.: July 1923 to date Chf. of Party on location, and Res. Engr. on construction, State Highway Comm., Pierre, S. Dak., Highway work, State Aid and Federal Aid. (Active practice 4 years: Sub-Prof. work 1.3: Prof. work 2.7: Res. Ch. 1.2: Design 0.3). Refers to J. Berg, J. M. Brown, E. L. Clarke, G. E. Hanson, W. H. Robinson, S. R. Sharts.

FRANCIS, ERNEST DAVID—666 Forty-first Ave., San Francisco, Cal.—(Age 35. Born Hereford, England.)—1908. received Draftsman's diploma from International Correspondence Schools: Feb. 1909 to April 1910 Machinery Attendant, Cwmillery Steam Coal Collieries, oiling, reporting breakages and assisting in repairing: Dec. 1910 to (13) April 1913 Draftsman, Sydney Steel Co., structural steel detailing and checking: May 1913 to March 1914 Engr., Brode Iron Works, structural steel estimating, checking and field leveling: March 1914 to April 1916 Estimator and Designer, Pacific Rolling Mills, structural steelwork estimating, checking and designing: April to Aug. 1916 Draftsman with H. J. Brunnler, Structural Engr.: Aug. 1916 to June 1917 Draftsman with R. S. Chew, Civ. Engr., bascule bridge detailing and checking, design of gantry cranes, power houses and industrial buildings: June to Oct. 1917 Draftsman with Leonard & Day, Cons. Engrs., designing steel and concrete bridges: Oct. 1917 to May 1918 Engr. with Weeks & Day, Architects and Engrs., on design of bridges, buildings, etc.: May to Dec. 1918 Engr., Great Western Power Co., on hydro-electric transmission lines and power houses: Dec. 1918 to July 1919 Structural Engr. with Bradley, Bruff & Labarthe, Cons. Engrs., mining plants (Cerro de Pasco Copper Co. plant in Peru), designing, also inspecting steelwork and approving in shops of American Bridge Co.: July 1919 to date Engr. with Weeks & Day, in full charge of design and supervision (under general direction of Mr. Day) of work averaging \$3 000 000 per year. (Active practice 14.1 years: Sub-Prof. work 5.9: Prof. work 8.2: Res. Ch. 6.9: Design 2.3). Refers to J. R. Cahill, R. S. Chew, W. P. Day, J. B. Leonard, E. J. Schneider.

GRIMES, JOHN EDWARD ALOYSIUS—North of Scotland Bank, High St., Dundee, Scotland—(Age 23. Born Dundee, Scotland.) (B. S. in C. E., St. Andrews Univ., Univ. Coll., 311 Dundee, 1923.)—Aug. 1916 to March 1918 with James Carmichael & Co., Ltd., Engrs., Dundee, Scotland, fitting and erection of large driving engines of Corliss type as (1) Apprentice Fitter; fitting of steam boiler fittings to main piping in connection with Lancashire boiler installations; general millwright and repair work, previous shop service: March 1918 to March 1919 Wireless Eng. Student, North British Wireless Co. Schools, manipulation, care and maintenance, repairs, erection, principles and practice, telegraphy: April 1919 to Sept. 1923 Student, Dundee Univ.: 1924 on Sinclair Oil Refinery, Marcus Hook, Pa., structural engineering, mainly drafting. (Active practice 2.6 years). Refers to M. den H. Kolyn. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

HAGGERTY, DANIEL JOSEPH—925 Westfield Ave., Elizabeth, N. J.—(Age 30. Born Elizabeth, N. J.)—Student, International Correspondence Schools, hydrographic and 312 topographic surveying (1 year), Newark (N. J.) Technical School, mathematics and surveying (evenings, 1 year), Columbia Univ., railroad engineering and structural mechanics, (1) (late afternoon and evening, 2 years), F. E. Wilson, C. E. course (mall), structural steel design (1 year): Sept. 1911 to April 1912 Rodman with City Engr., Elizabeth, N. J.: May 1912 to Oct. 1917 Instrumentman, Chf. of Party, Asst. to Div. Engr. (1 month), Acting Div. Engr., Public Service Ry. Co., Elizabeth, design and construction of street railways and interurban railroads, including special work, pavements, buildings, bridges, sewers, compilation of public utility reports, estimates, etc.: Nov. 1917 to Aug. 1919 Lieut. (Senior Grade), U. S. Navy, Executive Officer, U. S. S. *Kittery*, work included responsible charge of ship maintenance and repairs, design and construction of equipment for handling heavy cargoes, etc.: Aug. 1919 to date Constr. Foreman, Highway Inspector, Estimating Engr., Chf. Estimating Engr., Standard Oil Co., Bayway Refinery, Elizabeth, refinery construction, including stills, steel tanks, oil, water, steam, acid, electric and sewer lines, brick and concrete buildings, railroads, general reinforced concrete, etc. (Active practice 10.7 years: Sub-Prof. work 4.9; Prof. work 5.8; Res. Ch. 3: Design 2.2). Refers to H. S. Austin, T. E. Collins, C. H. Gaedcke, T. W. Waddington, J. Verner, P. P. Wyman.

HALL, WILFRED MCGREGOR—P. O. Box 1902, Philadelphia, Pa.—(Age 29. Born Denver, Colo.) (B. S. in C. E., Univ. of Colo., 1916.)—May 1916 to Jan. 1918 Asst. 313 Engr. with Chas. T. Main, Engr., Boston, Mass., on layout and inspection, hydro-electric development: Jan. to March 1918 Supt. of Constr., U. S. Indian Irrigation Service, Albuquerque, N. Mex., on construction of jetties, irrigation investigation: March to Dec. 1918 Private, Corporal and 2d Lieut., U. S. Army, Coast (Heavy) Artillery Corps: Jan. 1919 to Feb. 1920 Asst. Engr., J. A. P. Crisfield Contr. Co., Philadelphia, Pa., on layout and inspection, hydro-electric development: Feb. 1920 to Sept. 1922 with Chas. T. Main, until May 1920 as Res. Engr. on supervision of textile mill construction, Fall River, Mass., then Engr. on surveys, estimates and design, hydro-electric development, Belgian Congo, Africa: Sept. 1922 to Oct. 1923 Engr., J. A. P. Crisfield Contr. Co., on surveys, stream flows, foundation borings, test pits for concrete material, designs, estimates, and report for hydro-electric development, Housatonic River, Conn.: Oct. 1923 to date Erecting Engr., The U. G. I. Contr. Co., Philadelphia, on surveys, foundation borings, investigations for concrete material, earth dam material, and stream flow, designs, estimates and report, Garoga Creek, New York. (Active practice 7 years: Res. Ch. 6.1: Design 2.1). Refers to E. H. Burroughs, Jr., I. C. Crawford, H. J. Hoard, M. S. Ketchum, F. E. Lamphere, I. N. Towne, W. F. Uhl.

HARDENBERGH, WILLIAM ANDREW—P. O. Box 1728, Birmingham, Ala.—(Age 35. Born Galena, Ill.) (B. E., Union Coll., 1912.)—Nov. 1912 to Dec. 1913 Recorder, 314 Transitman and Chf. of Party, Knoxville Power Co., Maryville, Tenn., on survey work, hydro-electric development in western North Carolina: Jan. to June 1914 Engr. in (10) charge of preliminary work on hydro-electric surveys, Mongaup Power Co., Luzon, N. Y.: June 1914 to Feb. 1918 Asst. and Associate Editor, *Municipal Journal* (now *Public Works*), New York City, also acted as Field Editor, on all kinds of editorial work: Feb. 1918 to June 1920 Asst. San. Engr., U. S. Public Health Service, in charge extra cantonment sanitary engineering (water supply, sewage, and mosquito control), at Camp Beauregard, Alexandria, La., and Camp Bowie, Tex., also research in sewage disposal, North Carolina: June 1920 to Oct. 1921 Chf. Engr., Chemical Toilet Corporation, Syracuse, N. Y., in charge of all work in the South, at Charlotte, N. C.; designed

and installed septic tanks for industrial plants and communities; also installation of chemical equipment: Oct. 1921 to date San. Engr. and Director of rural sanitation, Jefferson County Board of Health, in charge of all rural health work, water supplies and sewage treatment; also of communicable disease work: at present completing revision of instruction pamphlets on water supply and purification, and sewerage and sewage treatment for International Correspondence Schools, Scranton, Pa.: Major, San. Reserve Corps. (Active practice 11 years: Sub-Prof. work 1.1: Prof. work 9.9: Res. Ch. 7.4: Design 4.7). Refers to G. H. Bishop, J. A. C. Callan, A. P. Folwell, J. W. Kendrick, F. W. Skinner, W. G. Stromquist, R. L. Totten.

HENDERSON, WILLIAM DAVIS—12 Bemis Rd., Wellesley Hills, Mass.—(Age 33. Born Edgewater, N. Y.) (B. S. in Civ. Eng., Tufts Coll., 1914.)—June 1914 to May 1917 with Mead-Morrison Mfg. Co., East Boston, Mass., 1½ years as Office Asst. in Contr. Dept., and 1½ years Supt. on construction of large coal-handling plants: June to Sept. (2) 1917 Draftsman on coal-mining plant details, Roberts & Schaefer Co., Chicago, Ill.: Oct. 1917 to March 1920 Inspector, construction work, Bureau of Yards and Docks, Navy Dept., in Public Works Dept., U. S. Submarine Base, New London, Conn., 6 months surveying and inspecting construction, and 2 years Supt. of day labor force handling construction and maintenance of buildings and yard equipment: April 1920 to date Asst. Engr. with Jackson & Moreland, Engrs., Boston, Mass., 1½ years supervising construction of industrial plants and power plants; 1½ years drafting and designing forms and falsework for concrete arch bridges; past 1½ years Project Mgr. on design and supervision of construction of hydro-electric development, including dam and power house having three 2500-h. p. units. (Active practice 9.7 years: Sub-Prof. work 2.8: Prof. work 6.9: Res. Ch. 6.4: Design 1.5). Refers to G. S. Burrell, E. H. Cameron, H. C. Daggett, D. C. Jackson, E. H. Rockwell, F. B. Sanborn.

HENRIQUEZ, CHARLES SYDNEY, Jr.—Struan, Beechwood Ave., Cross Roads, Jamaica—(Age 23. Born Falmouth, Jamaica.) (B. S. in Civ. Eng., Clemson Agri. and Mech. Coll., 1921.)—Aug. to Dec. 1921 Asst. Lineman, Southern Bell Telephone & Telegraph Co.: Feb. 1922-April 1923 Asst. Engr. on construction of Chapelton-Frankfield Extension, Jamaica Govt. Ry.: May to July 1923 Surveyor in charge of field party, plans and estimates, deviations of Louisiana Road for Public Works Dept.: July 1923 to date Asst. Engr., Kingston & St. Andrew Corporation, taking levels for Yallahs and Green Rivers Water Supply Scheme, also detail street surveys for city improvement. (Active practice 2.2 years: Sub-Prof. work 2: Prof. work 0.2: Res. Ch. 0.2). Refers to R. S. Crossman, J. H. L. Dodd, H. R. L. Fox, S. C. Henriques. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

HITCHMAN, ALEC BYERS—410 East Dewey Pl., San Antonio, Tex.—(Age 41. Born Mt. Pleasant, Pa.)—Sept. 1902 to June 1903 student, Univ. of Nebraska: Nov. 1903 to Feb. 1904 Rodman, Chainman, and Recorder, Mexican Central Ry.: March to April 1904 Draftsman, Ferrocarril Tamaulipeco, Linares to San Jose, Mexico: April to May (15) 1904 Topographer and Draftsman, Mexican Central Ry.: July to Sept. 1904 Chainman and Rodman, Geo. W. Bates, U. S. Govt., contract survey: Oct. 1904 to March 1906 Asst. Engr., Obras Publicas de Canalization entre Tuxpamy y Tampico, C. E. Shillaber, Contr., Mexican Govt. work, canal location and construction, triangulation and soundings, Laguna de Tamiahua, Hydrographic survey, Tanhuiljo River: April 1906 to March 1907 and Feb. 1908 to March 1912 Engr. in charge of same work: May to Oct. 1907 and April to Dec. 1912 Draftsman, Chf. Engr.'s office, Union Pacific R. R., Omaha, Neb.: Jan. 1913 to March 1916 Office Engr. and some field work, Mexican Gulf Oil Co., Tampico, Mexico, compilation of all kinds of land maps, preparation of various concession plans, wharf, pipe-line, boiler and pump-house plans: March 1916 to April 1922 in private practice, at Tampico, land, pipe-line, hydrographic, dredging surveys and construction supervision, design, descriptive memoria and concession plans, wharves, pump and boiler stations, steel and earthen oil storage and construction supervision: compilation of all kinds of maps of Mexican oil fields, also well and drilling reports; measuring flow of oil wells, etc., for oil industry: May 1922 to date same practice but not active. (Active practice 17.6 years: Sub-Prof. work 4: Prof. work 13.6: Res. Ch. 12.1: Design 1.6). Refers to F. F. Axtell, L. W. Barbour, H. Carrington, C. J. Crawford, W. L. Fulton, K. G. Howard, R. T. Jordan, S. L. Kone, J. S. Kunkel, H. E. McClintock.

JAMES, WILLARD WHITAKER—218 Leland Ave., Plainfield, N. J.—(Age 43. Born Mansfield, Conn.)—1899 graduated from Connecticut Agricultural Coll.: May 1900 to 318 April 1903 with Sanderson & Porter, Engrs., New York City, on preliminary surveys and construction of trolley lines, 10 months as Rodman and 2 years as Transitman in (1) charge of party, responsible for alignment, including many transition curves, grades, staking out of bridges, etc.; also land and right-of-way surveys and map-making: April 1903 to date with Central R. R. Co. of New Jersey as follows: April 1903 to Jan. 1912 Transitman in office of Chf. Engr., having charge of parties making preliminary land and general surveys; in charge of construction of bridges, buildings, grading operations, pile foundations and other construction; design of track layouts, retaining walls, dams, piers, abutments, etc.; Jan. 1912 to May 1915 Res. Engr. in office of Chf. Engr. in charge of construction of station and shop buildings (reinforced concrete, brick and steel); elevation of tracks, yard layouts, spur tracks, bridges; land surveys and general construction; in charge of work of estimating cost of eliminating all street and highway grade crossings along C. R. R. of N. J. in New Jersey; May 1915 to Oct. 1919 Asst. Engr. in Valuation Dept. in charge of major part of field work in connection with Federal valuation; Oct. 1919 to March 1921 Asst. Valuation Engr. in charge of field and office work, except that in connection with land equipment; since March 1921 Valuation Engr. in charge of work in connection with Federal valuation. (Active practice 23.8 years: Sub-Prof. work 0.8: Prof. work 23: Res. Ch. 22: Design 9.4). Refers to D. D. Barlow, C. Hansel, A. E. Owen, C. W. Stark, C. H. Stein, A. W. Vars, J. J. Yates.

JANSSON, MARTIN ERNEST—404 South Poplar St., Carbondale, Ill.—(Age 23. Born Chicago, Ill.): (B. S. in Civ. Eng., Univ. of Ill., 1923.)—Oct. 1923 to date Chairman, 319 Illinois Central R. R. (Active practice 0.3 year). Refers to M. L. Enger, J. E. Smith, (8) A. N. Talbot, C. C. Williams, W. M. Wilson.

JENNINGS, LOUIS JAMES—1729 Grove St., Berkeley, Cal.—(Age 27. Born Los Angeles, Cal.) (B. S., Coll. of Civ. Eng., Univ. of Cal., 1923.)—1914 to 1917 (3 years) Carpenter and Millwright, setting machinery, W. C. Jennings, Los Angeles, Cal.: 1917 to 1919 (1½ years) Corporal in an engineering regiment, U. S. Army, surveying, building barracks, dugouts, repairing roads, etc.: 1919 to 1920 (nearly 4 months) Surveyor and Draftsman, topographical surveys (Rodman to Instrumentman), Ed. Spence, Beverly Hills, Cal.: 1923 to date (6 months) Asst. Engr. with C. Derleth, Jr., Berkeley, Cal., keeping office records, calculating quantities and estimating costs of engineering structures, testing and reporting on engineering materials, acting as Representative of Mr. Derleth in minor matters, such as transmitting instructions, etc. (Active practice 5.3 years). Refers to T. F. Chace, R. E. Davis, C. Derleth, Jr., F. S. Foote, C. G. Hyde, C. H. Lee.

JONES, WILLIAM MILNE—152 Market St., Paterson, N. J.—(Age 27. Born New York City.) (C. E., Cornell Univ., 1918.)—June 1918 to March 1919 2d Lieut., U. S. Army, 321 116th Engrs., A. E. F.: June 1919 to April 1923 with Turner Constr. Co., until Aug. 1922 as Draftsman and Checker, at New York City, on plans, estimating and designing (1) concrete buildings, then Asst. Engr., at Atlanta, Ga., on designing and writing specifications for steel and concrete buildings: April 1923 to Jan. 1924 Asst. Engr., John W. Ferguson Co., Paterson, N. J., on designing and specifications for steel, brick and concrete buildings. (Active practice 5.4 years: Sub-Prof. work 2.2: Prof. work 3.2: Res. Ch. 1.9: Design 0.8). Refers to R. W. Boyd, J. W. Ferguson, E. E. Haskell, F. R. McMillan, E. J. Moore, G. H. Preston, H. W. Roberts, A. W. Stephens.

KERR, DUNCAN JOHN—1617 Summit Ave., St. Paul, Minn.—(Age 40. Born Glasgow, Scotland.) (B. Sc. in Civ. Eng., Univ. of Glasgow, 1904.)—Summers 1902 and 1903 322 Detailer, and April to Sept. 1904 on structural design, Sir Wm. Arrol & Co., Ltd., Bridge Bldrs., Glasgow: 1904 to 1908 (3½ years) Rodman, Pennsylvania R. R. Co.: (7) 1908 to 1909 (1 year) Location Draftsman and Asst. on reconnaissance, Chicago, Milwaukee & Puget Sound Ry. Co.: 1909 to 1911 (2 years) Draftsman and Chf. Draftsman, Oregon Trunk R. R.: 1911 to 1913 (2 years) Chf. Draftsman and Office Engr., S. P. & S. Ry. Co.: 1913 to date with Great Northern Ry. Co.: 5 years as Office Engr.; 2 years as Corporate Engr.; 1 year Asst. to Vice-Pres., Executive Dept.; past 3 years Asst. to Vice-Pres., Operating Dept. (Active practice 16.5 years: Sub-Prof. work 4.5: Prof. work 12: Res. Ch. 10: Design 3.5). Refers to O. S. Bowen, R. Budd, A. M. Burt, J. R. W. Davis, A. H. Hogeland, L. M. Perkins, L. Yager.

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- KIMES, CARROLL SOUDERS**—300 Yost Ave., Spring City, Pa.—(Age 24. Born Spring City, Pa.) (B. S. in Civ. Eng., Pa. State Coll., 1921.)—Aug. 1921 to June 1922 Structural Steel Draftsman, Bear Eng. Co., Philadelphia, Pa., estimating, detailing and designing structural steel for buildings: June 1922 to Jan. 1923 Draftsman, Pennsylvania State Highway Dept., plotting field notes, figuring final estimates, designing grades and curves, figuring earth work quantities: Feb. to July 1923 Draftsman and Estimator, Carlem Eng. Co., Pittsburgh, detailing, designing and estimating reinforced concrete building construction: July 1923 to date Inspector, Pennsylvania State Highway Dept., on reinforced concrete road, ran line, grades and kept field cost data, staked out bridges and culverts. (Active practice 2.4 years: Design 1.2). Refers to P. B. Breneman, R. O'Donnell, R. L. Sackett, D. C. Stackpole, E. D. Walker.
- KLAESIUS, CARL**—Care, Truscon Steel Co., Youngstown, Ohio—(Age 35. Born Baltimore, Md.)—1906 to 1909 Draftsman, and 1909 to 1911 Timekeeper and Asst. Erection Supt., 324 Bartlett Hayward Co., Baltimore, Md.: 1911 (3 months) Draftsman, Baltimore Sewerage Comm.: 1911 to 1913 (2 years) Structural Steel Draftsman, Baltimore Bridge Co.: (6) 1913 to 1915 (2 years) Structural Steel Draftsman, Squad Boss with Dietrich Bros., Baltimore: 1915 to 1917 (2 years) Structural Steel Draftsman, Squad Boss, Carnegie Steel Co., Baltimore: 1917 to 1919 (2 years) Structural Engr., Designer and Estimator, The Austin Co., Philadelphia, Pa., about one-half of time superintending and approving making of steel details in various fabricating plants: 1919 to date (5 years) Structural Engr., Designer and Estimator, Truscon Steel Co., Youngstown, Ohio, in charge of Standard Bldg. Div. of Eng. Dept. (2 years) and of designing and estimating structural steel on industrial buildings of all kinds (2 years). (Active practice 18.2 years: Res. Ch. 4: Design 2). Refers to J. Kahn, W. C. Schnabel, E. U. Smith, R. D. Snodgrass, N. H. Sturdy.
- KOERNER, CARL ALBIN**—426 Odd Fellows Bldg., St. Louis, Mo.—(Age 41. Born Kirchberg, Germany.)—1900 to 1901 (6 months) Tracer, American Bridge Co., St. Louis, 325 Mo.: 1901 to 1904 (3 years) Draftsman, National Iron Works, St. Louis: 1904 to 1907 (3 years) student, Univ. of Missouri: 1907 to 1908 (1 year) Contr. and Designing (14) Engr., National Iron Works, St. Louis: 1908 to 1909 (nearly 3 months) Eng. Draftsman with Brennecke & Fay, St. Louis: 1909 to 1912 (3½ years) Draftsman and Engr., Corrugated Bar Co., St. Louis (now at Buffalo, N. Y.): 1912 to date (12 years) member of firm, Koerner Eng. Co., St. Louis, general engineering, such as consulting, inspecting, preparing plans and specifications, etc., in responsible charge of work; work designed in office covers structural steel and reinforced concrete, also timber work, including foundries from flow sheet to complete plans and specifications, letting contracts and supervising work; several high schools at Atlanta, Mo., etc., Hall Theatre Bldg., Centuria, Ill.; Stewart Bridge and Tribune Bldg., Columbia, Mo.; Guaranty Bank & Trust Co., Lexington, Ky.; First National Bank, Liberty, Mo.; several garages and schools in East St. Louis, and numerous buildings for Culver Military Academy at Culver, Ind., etc. (Active practice 20.2 years: Res. Ch. 14: Design 14.5). Refers to W. C. E. Becker, S. W. Bowen, J. J. Clark, L. A. Hoyneck, W. J. Knight, A. E. Lindau.
- KREMERS, ROBERT EBENEZER**—1370 E. 32d St., Portland, Ore.—(Age 44. Born Drenthe, Mich.) (A. B., Hope Coll., Holland, Mich., 1898; B. S. in Civ. Eng., Univ. of 326 Mich., 1900.)—1902 to 1904 (over 2 years) Asst. to State Engr. of Utah, in charge of making topographic surveys of irrigation districts, installing stream measurement (12) devices and gauging streams and irrigation canals: 1904 to 1905 (6 months) Asst. to Frank C. Kelsey, Cons. Civ. Engr., Salt Lake City, Utah, in charge of surveys and design of water-works, hydro-electric plants, irrigation works and sewer systems: 1906 to 1910 with Oregon Short Line R. R., Salt Lake City, 2 years as Engr. of Bldgs. (under Chf. Engr.), in charge of design of all buildings erected by the railroad and Southern Pacific Lines East of Sparks, Nev., including passenger and freight depots, engine houses, coaling stations, etc., and 1½ years Engr. of Bridges and Bldgs. on same work, also design of all bridge structures; had direct charge of structures costing over \$2 000 000: 1910 to 1911 (over 1 year) Asst. to Frank C. Kelsey, at Portland, Ore., in charge of surveys and designs for various projects, including Nisqually Hydro-Electric Power Plant, Tacoma, Wash., water supply for various cities, etc.: 1912 to 1914 (2½ years) Chf. Inspector of Constr., Bureau of Bldgs., City of Portland, under Inspector of Bldgs., responsible for checking of plans and inspection of all buildings (approx. \$30 000 000): 1914 to 1918 (2½ years) Chf., Bureau of Highways and

Bridges, Dept. of Public Works, Portland (under City Engr.), in charge of design, construction and maintenance of all street work and bridges in the city excepting Willamette River Bridges: 1918 to 1923 (except 4 months in military service) Chf., Bureau of Constr., Dept. of Public Works, Portland (under City Engr.), in charge of design and construction of all street, sewer and bridge improvements; from 1914 to 1923 had charge of design and construction of over \$12 000 000 worth of city improvements, including construction of seven viaducts included in Oregon-Washington R. R. & Navigation Co. regrade (cost approx. \$900 000); reconstruction of Tanner Creek Sewer (cost over \$300 000), design and construction of large drainage channel (cost \$350 000), Lents Trunk and Foster Road Sewer System (\$950 000): 1923 to date (nearly 1 year) member of firm, Hedrick & Kremers, Cons. Engrs., Portland, in charge of design and erection of four bridges to be built by Multnomah County, Ore. (aggregate cost \$5 250 000). (Active practice 18.3 years: Sub-Prof. work 0.2: Prof. work 18: Res. Ch. 18: Design 13.2). Refers to I. G. Hedrick, C. P. Keyser, O. Laugaard, F. M. Randlett, M. E. Reed.

KUNDAJI, GOPALRAO DEVAPPAYA—Saraswat Colony, Santa Cruz, Bombay, India—(Age 29. Born Puttur, South Kanara Dist.)—Dec. 1915 received diploma and certificate in Civ. Eng., Coll. of Eng., Poona, India: San. Surveyor, India, granted by Govt. of Bombay and Royal San. Inst., London, England: March 1917 to Dec. 1919 Overseer

(1) in charge on roads and buildings, bridges, reinforced concrete works, pile bridges, designing and estimating and other works of Public Works Dept.: Jan. to Dec. 1920 Overseer in charge of new development scheme at Sholapur, consisting of designing, estimating and construction of buildings, roads, drainage, sanitary, bridges and other town planning works: Dec. 1920 to Oct. 1921 Head Surveyor, hydro-electric surveys, Bombay Presidency, responsible charge of investigations, surveys, designing and estimating hydro-electric projects, Bombay Govt.: Oct. 1921 to May 1922 Civ. Eng. Asst. on Kutch Harbor Project, Sir George Buchanan, Cons. Engr.: June 1922 to date Marine Surveyor, Backbay Reclamation Scheme Development Dept., Bombay, marine investigations and projects, including dredging. (Active practice 6.8 years: Sub-Prof. work 0.6: Prof. work 6.2: Res. Ch. 6.2: Design 6.2). (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

LAMOND, ARTHUR—Care, Braithwaite & Co., Ltd., Engrs., Clive Works, Kidderpore, Calcutta, India—(Age 26. Born Blantyre, Scotland.)—Feb. 1912 to April 1915 Apprentice

328 Draftsman, Alex. Findlay & Co., Structural Engrs., Motherwell, Scotland; also student (evenings) and received 3d-year certificate in Civ. and Mech. Eng. from Hamilton (1) (Scotland) Technical School, and 1-year certificate in Civ. Eng. from Royal Technical Coll.: April 1915 to Nov. 1918 with Royal Engrs., Field Co., 3 years in France; after April 1918 commissioned and with Tank Heavy Bridging Battalion: Nov. 1918 to April 1919 Draftsman, Alex. Findlay & Co., detailing work for steel structures, generally of heavy design: May 1919 to July 1922 with Jessop & Co., Structural Engrs., Calcutta, India, about 1½ years as Draftsman, then Senior Asst. on supervision, checking and design: Aug. 1922 to date Designer and Head Draftsman, Braithwaite & Co., Structural Engrs., Calcutta, in charge of drawing office work. (Active practice 9.9 years: Sub-Prof. work 4.7: Prof. work 5.2: Res. Ch. 1.5: Design 3.2). (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

LAWLOR, JOSEPH PATRICK—1548 Monroe Ave., Memphis, Tenn.—(Age 30. Born DeWitt, Iowa.) (B. S. in Civ. Eng., Univ. of Ill., 1921.)—June 1915 to Aug. 1916 with

329 Dakota Eng. Co., Mitchell, S. Dak., on surveys, drafting and inspection of water-works and sewers: 1917 to 1919 (over 1 year) Capt., 40th Inf., U. S. Army: Sept. 1919 to (10) Jan. 1920 with Dakota Eng. Co.: Feb. 1921 to March 1923 with Layne & Bowler Co., Memphis, Tenn., on water supply surveys, underground waters, design and construction of wells and pumping equipment: March 1923 to date Chf. Engr., Layne-Central Co., Memphis, on similar work, also Secy.-Treas. of Company. (Active practice 4.5 years: Res. Ch. 2.6: Design 1.8). Refers to I. O. Baker, R. S. Charles, J. G. Gordon, Jr., R. E. Hutchins, R. G. Ridgley, A. J. Willis.

LAWRENCE, FESLER EMMETT—City Hall, Sapulpa, Okla.—(Age 33. Born Lock Springs, Mo.) (B. S. in C. E., Univ. of Mo., 1914.)—Sept. 1914 to April 1916 Chairman and

330 Rodman, Atchison, Topeka & Santa Fe Ry., part of time in charge of party on maintenance and construction: April 1916 to Nov. 1917 City Engr. of Cameron, Mo., in charge (15) of design and construction of pavements and sewers, etc.; laid 2 miles of concrete

paving, extended water mains and made complete plans for sewers: Nov. 1917 to May 1918 Asst. Computer, May to Nov. 1918 Computer, Nov. 1918 to Aug. 1919 Office Computer; and Aug. to Nov. 1919 Special Computer, Bureau of Valuation, Western Dist., Kansas City (Mo.) Interstate Commerce Comm.: Nov. 1919 to May 1922 Office Engr., Dept. of Highways, Creek County, Okla., in charge of office work in construction of roads and bridges: May 1922 to May 1923 City Engr. of Sapulpa, Okla., in charge of all engineering and street work and supervision over city cemeteries; had direct charge of all construction work carried on by the city: May 1923 to date City Mgr. of Sapulpa, in direct charge of all work of city. (Active practice 9.3 years: Sub-Prof. work 1.5: Prof. work 7.8: Res. Ch. 7.3: Design 3.3). Refers to M. E. Binckley, V. H. Cochrane, R. C. Gray, A. Montgomery, F. C. Thorpe, J. S. Worley.

LINDEMAN, HENNING JOEL—113 Drake Court, Omaha, Nebr.—(Age 25. Born Malmo, Nebr.)—Student, Omaha Univ. (1 year) and Chicago Univ. (2 years): June to Sept. 331 1916 Draftsman, and June to Sept. 1917 Draftsman and Instrumentman under Asst. City Engr., Omaha, Nebr.: June 1918 to Jan. 1919 at Engr. Officers' Training Camp, (14) Camp Humphrey, Va.: Jan. to Oct. 1919 Field Engr. in charge of grading, with City Engr., Omaha: Oct. 1919 to April 1920 promotion work, private railroads, western Nebraska, making location, estimates and designing same: April to Sept. 1920 and Feb. 1921 to March 1922 Res. Engr. on municipal work at Laurel, Nebr. (6 months) and Wayne, Nebr. (1 year), Rohrbough Eng. Co., Omaha: Sept. 1920 to Feb. 1921 Asst. Engr., Union Pacific R. R. Co., at Rock Springs, Wyo.: March to Nov. 1922 Res. Engr. and promotion work, municipal engineering, Ogden, Iowa, and Wakefield, Nebr., Bruce & Grupe, Cons. Engrs., Omaha: Dec. 1922 to April 1923 topographical survey and sewerage design, Topeka, Kans.: May 1923 to date Field and Constr. Engr., Dept. of Public Works, Nebraska. (Active practice 6.2 years: Res. Ch. 4.9: Design 0.8). Refers to J. A. Bruce, H. E. Cotton, D. R. Donlen, G. P. Dorsey, E. Y. Grupe, Jr., H. E. McClintock.

LINVILLE, RALPH KERWIN—City Engr., Danville, Va.—(Age 36. Born Baltimore, Md.)—Feb. 1909 to Jan. 1916 with Baltimore City Water Dept., nearly 4 years as Instru- 332 mentman and Chf. of Party on surveys, road and masonry dam construction, stream tests, etc., in connection with new water supply; and 3 years Asst. Engr. on construction of filtration plant, having charge of several separate contracts on this work and also of all road and paving around the plant: May to Nov. 1916 Res. Engr. on highway construction in Mississippi, Washington County Highway Comm., having charge of a district for location and construction of highways and bridges: Nov. 1916 to May 1917 Constr. Engr., Bethlehem Steel Co., Sparrows Point, Md., on enlarging of Sparrows Point Plant: May 1917 to Oct. 1918 Asst. County Highway Engr., Spartanburg County Highway Comm., Spartanburg, S. C., on surveys, location and design of highways, paving and bridges: Oct. 1918 to Nov. 1919 1st Lieut. and Capt., U. S. Army, Constr. Div., in charge of various construction at army camps: Nov. 1919 to date City Engr., Danville, Va., in charge of all engineering, paving, sewers, parks, water improvements, etc., including general administration, design, construction. (Active practice 14.7 years: Sub-Prof. work 3.9: Prof. work 10.7: Res. Ch. 10.7: Design 6.2). Refers to W. F. Day, W. D. Janney, H. M. Pirnie, S. Purcell, A. M. Quick.

LUDBERG, ANDREW PETER—1017 Logan St., Moscow, Idaho—(Age 34. Born Ostersund, Sweden.) (B. S. in C. E., 1911, and C. E., 1923, Univ. of Wis.)—July 1911 to Jan. 333 1912 Concrete Inspector on outfall sewer, City of Madison, Wis.: Jan. 1912 to April 1913 Draftsman, Chicago, Milwaukee & St. Paul R. R., Chicago office, 9 months detail- (12) ing and designing reinforced concrete structures, and 6 months Squad Foreman in charge of similar work: April 1913 to Sept. 1921 with American Bridge Co., Gary, Ind., until 1916 as structural Steel Draftsman, including detailing and checking of Shop drawings; then Squad Foreman in charge of work covering all kinds of bridges, machinery for movable bridges, ore docks, viaducts, mill and office buildings, and miscellaneous steel structures; designing shop details, planning erection, and designed several structures: Sept. 1921 to date Associate Prof. of Civ. Eng., Coll. of Eng., Univ. of Idaho. (Active practice 12.7 years: Sub-Prof. work 4.3: Prof. work 8.4: Res. Ch. 8.4: Design 1). Refers to I. C. Crawford, F. W. Dencer, M. R. Lewis, F. E. Turneaure, C. E. Webb.

MCLEAN, VINCENT—2110 South 50th Ave., Cicero, Ill.—(Age 27. Born Winnipeg, Canada.) (B. Sc. C. E., Univ. of Manitoba, 1923.)—1914 (6 months) Rodman, and 1915 334 (6 months) Concrete Inspector, Greater Winnipeg Water Dist.: 1915 to 1919. (3½ years)

- with Canadian Engrs., Staff Sgt., water supply and tunnel lighting for Canadian Corps
- (8) Area: 1919 Lecturer on internal combustion engines, Khaki Coll.: 1919 (6 months) Instrumentman, Canadian Pacific Ry.: 1920 to 1921 Asst. Engr., Good Roads, Springfield, Manitoba (nearly 9 months), Demonstrator, Thermo. and Hydro. laboratories, Univ. of Manitoba (nearly 5 months), and Supt., Constr., Good Roads, St. Andrews (over 7 months): 1922 with Canadian National Ry., Water Supply Dept., on location and proposals for surface water supply reservoirs, Chf. of Party (over 7 months), investigating economic cost of hardness in feed waters (nearly 3 months): 1923 (nearly 5 months) Arch. Draftsman, Western Elec. Co., Hawthorne; 1924 on layout and design of power plant enlargement. (Active practice 8.4 years: Sub-Prof. work 5.8: Prof. work 2: Res. Ch. 0.6). Refers to E. E. Brydone-Jack, A. W. Consoer, J. N. Finlayson, L. I. Johnstone, C. S. Millard, J. G. Sullivan.

McNAMARA, CHARLES JOHN—North Platte, Nebr.—(Age 43. Born North Platte, Nebr.) (B. S. in C. E., Univ. of Nebr., 1906.)—April 1898 to April 1899 Office Boy, and April 335 1899 to Feb. 1906 (except 4 years at College), Clerk, Chainman, Rodman and Instrumentman, Union Pacific R. R. Co.: Feb. 1906 to May 1912 with U. P. R. R. Co. as (14) follows: Feb. 1906 to March 1907 Office Engr. on construction of double track in Wyoming; March 1907 to Feb. 1908 Asst. Engr. on main line construction in Wyoming and Colorado; Feb. 1908 to May 1909 Asst. Engr. on maintenance of way and bridge construction in Nebraska and Wyoming; May 1909 to April 1911 Draftsman; April 1911 to May 1912 Asst. Engr. on branch-line construction in Nebraska; May 1912 to March 1918 in private practice as Civ. Engr. at North Platte, Nebr., surveying, irrigation and municipal construction, designing, estimating and in charge of construction; from 1913-1917 City Engr.: March 1918 to date on municipal and irrigation engineering, estimating, designing, planning and in full charge of construction (over \$1 400 000). (Active practice 22.9 years: Res. Ch. 16.2: Design 2.5). Refers to R. L. Cochran, W. Grant, R. M. Green, C. E. Mickey, J. R. Rippey.

MARTIN, GEORGE HARRIS, Jr.—15 E. Franklin St., Tarrytown, N. Y.—(Age 25. Born Tarrytown, N. Y.) (B. S. in Civ. Eng., N. Y. Univ., 1922.)—Dec. 1918 to Oct. 1919 336 Inspector and Transitman on concrete road construction for Chas. MacDonald, County Engr., White Plains, N. Y.: June 1922 to date Field Engr., Fred Snare Corporation, on (1) construction of steel siphon pipes for Board of Water Supply, New York City, costs, design of plants, temporary structures, estimates and quantities. (Active practice 2.5 years). Refers to F. J. Litter, C. MacDonald, C. T. Schwarze, C. H. Sells, C. H. Snow.

MATHEWS, CLAUDE KELSEY—605 S. 3d St., Champaign, Ill.—(Age 27. Born Lexington, Mo.) (B. S. in C. E., Univ. of Kans., 1919.)—Nov. 1914 to Jan. 1915 and April to June 337 1915 Timekeeper and Asst. to Contr., S. J. Mathews Constr. Co., Kansas City, Mo., on transmission line, etc.: Jan. to April 1915 Groundman, Kansas City Elec. Light Co., ground- (8) ing secondaries: June to Sept. 1915 Timekeeper and Straw Boss, S. J. Mathews Const. Co., on sewerage system and disposal plant for Mt. Ayr, Iowa: June to Sept. 1916 mechanical drafting, B. & B. Drilling & Mfg. Co., detailing for high speed electric oil drill: June to Aug. 1917 Instrumentman and Draftsman, topographical mapping, Jacoby Eng. Co., Kansas City: Aug. to Oct. 1917 Rodman, Interstate Commerce Comm.: June to Sept. 1918 Asst. Engr., Kansas State Board of Health, on inspection and report on water-purification plants: June 1919 to March 1921 Superv. Engr., Burns & McDonnell Eng. Co., Kansas City, water distribution system, Baker, Mont.: well, distribution system, remodelling power and light plant, and installment of power and light plant equipment, Shattuck, Okla.; sewerage system, Ft. Madison, Iowa: Asst. on preliminary surveys for water supply and distribution system additions, El Reno and Henrietta, Okla.; water-purification plant, Parsons, Kans., and sewerage system and sewage-disposal plant, Baker, Mont.: March to Sept. 1921 Jun. Partner, Mathews Oil Co., Sapulpa, Okla., Oil Operators, leasing and drilling: Sept. 1921 to Feb. 1924 Instructor in Civ. Eng., Univ. of Illinois: summer 1922 on lot surveys, topographical maps and assisting City Engr. on pavements: summer 1923 with Wells Eng. Co., Geneva, Ill., on surveys and design of pavements. (Active practice 5.8 years: Sub-Prof. work 1.1: Prof. work 4.7: Res. Ch. 1.7: Design 0.3). Refers to H. E. Babbitt, I. O. Baker, C. S. Burns, M. L. Enger, R. E. McDonnell, C. C. Wiley, C. C. Williams.

MATTER, LAWSON DEACON—616 Emerald St., Harrisburg, Pa.—(Age 27. Born Harrisburg, Pa.) (B. S., Gettysburg Coll., 1918.)—June 1918 to Jan. 1919 2d Lieut., Engrs., 338 U. S. Army, until Aug. 1918 at Camp Humphreys, Va., in charge of construction of

- part of camp outfall sewer (work corresponded to that of Res. Engr.); then at Camp (4) Forrest, Ga., as Asst. to Camp Transportation Officer: March 1919 to date with Pennsylvania Dept. of Health as follows: March to May 1919 Draftsman and Chf. of Party in charge of field work; and assisting in design of sewage-treatment plant units for various state institutions; June 1919 to March 1920 Res. Engr. in complete charge on construction of extensions and additions to sewage-treatment works at Cresson State Sanatorium; April to June 1920 Asst. Engr. on special investigations of water purification and sewage-treatment works, sanitary surveys of streams; investigating industrial waste pollutions and determining remedies; July 1920 to Dec. 1922 Asst. Engr. on work stated subsequent to Jan. 1923 except housing; since Jan. 1923 Dist. Engr. in responsible charge of sanitary engineering in eleven counties, including examination of plans and field investigations of new, or extensions and changes in existing, water-works and all public and private sewerage projects for preparation of approval permits; supervision of operation of public water-works and sewage-treatment works; inspection and determining means of abatement of nuisances involving engineering; inspection and determination of measures for safe water supply, sewage disposal, lighting and ventilation in relation to housing, and similar work for county fairs and camps; advising municipal officials in sanitary engineering problems, etc.: Registered Prof. Engr., State of Pennsylvania. (Active practice 5.6 years: Prof. work 5.6: Res. Ch. 3.4: Design 3.8). Refers to G. D. Andrews, R. H. Craig, C. A. Emerson, Jr., F. S. Friel, M. C. Krause, R. O'Donnell, W. L. Stevenson.

- MATTHIAS, WILLIAM FERNON—35 Commercial St., Portland, Me.—(Age 33. Born Philadelphia, Pa.)—Jan. 1910 to June 1911 Structural Detailer, Carnegie Steel Co., 339 Edgar Thomson Works, made shop detail drawings of miscellaneous steel structures, including mill buildings, crane runways, etc.: June 1911 to Aug. 1912 Structural (2) Detailer, Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa., made general drawings, design and estimates for new buildings and plant maintenance: Aug. 1912 to Nov. 1913 Structural Detailer, Link-Belt Co., Philadelphia, made shop detail drawings, pertaining to coal-handling plants, power-house layouts, coal tipples, etc.: Nov. 1913 to March 1916 Structural Draftsman, Bergen Point Iron Works, Bayonne, N. J., on design and detail of miscellaneous steel structures, including mill buildings, trestles, warehouses, etc.: April 1916 to Nov. 1917 Structural Designer, James H. Tower Iron Works, Providence, R. I., on design, detail, estimating of miscellaneous steel structures, including mill buildings, boiler houses and light bridges: Nov. 1917 to Feb. 1918 Structural Engr., Link-Belt Co., on design and detail of miscellaneous steel structures pertaining to coal-handling plants: Feb. to Dec. 1918 Inspector and Expediter, American International Shipbuilding Corporation, Hog Island, Pa., on inspection of steel erection for correction of drafting-room errors: Dec. 1918 to Feb. 1921 Asst. to Production Engr., Newburgh (N. Y.) Shipyards, Inc., in responsible charge of sequence of erection of steel ships, steel stock yards, and progress reports, curves, etc.: Feb. 1921 to date Structural Engr. in charge of Eng. Dept., Maine Elec. Co., Portland, Me., in executive charge of Eng. Dept., in sole responsible charge of all estimating, designing, subcontracting, technical correspondence and specifications; work includes steel unloading towers, stocking and reclaiming bridges and all types of coal-handling and hoisting apparatus. (Active practice 14 years: Sub-Prof. work 1.4: Prof. work 12.6: Res. Ch. 12.6: Design 9.6). Refers to T. H. Allison, J. C. Boyd, C. F. Chase, T. C. Desmond, A. Smith.

- MAXFIELD, CHARLES EDWARD—7311 Elton Ave., Cleveland, Ohio—(Age 45. Born Cleveland, Ohio.)—1896 to 1899 (3 years) Rivet Heater and Rigger Helper, erection 340 work on bridges, buildings and smoke stacks, American Bridge Co., Pittsburgh, Pa., Schultz Bridge Co., McKees Rocks, Pa., and Variety Iron Works, Cleveland, Ohio: 1899 (9) to 1901 (1 year) Rivet Heater and Layerout Helper in shop on building construction, Garry Iron & Steel Co., Cleveland: 1901 to 1902 (1 year) Layerout Helper and Fitterup in shop on building construction, Forest City Iron & Steel Co., Cleveland: 1902 to 1911 Layerout, Inspector and Field Erector (2 years), Gen. Foreman of shop (6 years) and Draftsman (1 year), McMyler Mfg. Co., Cleveland, on car dumper, ore bridge and locomotive cranes: 1911 Draftsman, C. O. Bartlett & Snow Co., Cleveland, on detailing and checking (about 3 months) and designing (over 2 months), on conveyor and elevating machinery: 1911 to 1912 Draftsman, Van Dorn Iron Works, Cleveland, detailing and checking (6 months) and designing (6 months): 1912 to 1916 Draftsman and Checker (nearly 1½ years) and Chf. Draftsman (3 years), Republic Structural Iron Works, Cleveland, on building construction and miscellaneous work: 1916 to 1917 (nearly 9 months) Eng. Draftsman, Grasselli Chemical Co., Cleveland, on building con-

struction: June 1917 to June 1923 Structural Engr., Cleveland Elec. Illuminating Co., on power-plant construction: June to Aug. 1923 Eng. Draftsman on building construction, with J. C. Spencer, Cons. Engr., Cleveland: Aug. 1923 to date in private practice as Structural Engr. (Active practice 22.1 years: Sub-Prof. work 3.9: Prof. work 18.2: Res. Ch. 17.5: Design 6.7). Refers to W. Dyer, G. W. Elspass, J. E. Ferguson, E. K. Miller, L. H. Miller, J. C. Spencer.

MYERS, JASPER MOSS—24 Euclid Ave., Albany, N. Y.—(Age 30. Born Glens Falls, N. Y.)—1914 graduated from Pratt Inst., Brooklyn, N. Y.: June 1914 to April 1915

341 Material Clerk, Turner Constr. Co.: April 1915 to May 1916 Structural Designer with H. H. DeForest, Albany, N. Y.: May 1916 to June 1917 with Pember & Campaign,

(3) Archts., Albany, in charge of design of structural steel and reinforced concrete: June 1917 to April 1918 with B. F. Witbeck, Albany, as Constr. Engr. on appraisal for railroad properties for Delaware County, N. Y., in complete charge of all field work: April to July 1918 with Ludlum Steel Co. and Canadian Ferro & Alloys, a subsidiary, designing and in charge of erecting electric furnace plant at Shawingan Falls, Que., Canada: July to Sept. 1918 with J. G. White Eng. Corporation, as Designer of reinforced concrete foundations for addition to power house No. 2, Muscle Shoals, Ala.: Dec. 1918 to April 1919 with Canadian Ferro Alloys in charge of designing and erection in additions to plant: April 1919 to Sept. 1920 with Pember & Campaign, as Chf. Engr. in charge of engineering work for Troy and Albany offices: Sept. 1920 to April 1921 Engr. and Estimator, Elliot C. Brown Co., New York City: April 1921 to date in private practice as Engr.-Bldr., Albany: Licensed Engr., State of New York. (Active practice 9.8 years: Res. Ch. 7.7: Design 0.3). Refers to L. H. Byam, C. W. Haefner, A. C. Hammond, L. C. Hammond, H. S. Harding, C. W. Post.

NISSLY, WARREN BALMER—906 North 5th St., Reading, Pa.—(Age 48. Born Elizabethtown, Pa.)—1911 graduated in Advanced Mathematics and Mechanics of Materials,

342 Drexel Inst.: July 1892 to June 1893 Chairman with A. Harvey Tyson, Reading, Pa., surveying and engineering work: June 1893 to July 1895 Rodman and Draftsman with

(4) Adam H. Leader, Reading, property surveys, measurements and estimates for contractors: Aug. 1895 to March 1897 Rodman and Draftsman with William H. Dechant, Reading, property surveys and maps, water-works and water-power installation plans: March 1897 to April 1902 with Philadelphia & Reading Ry. Co., Power House Dept., Philadelphia, 2½ years as Draftsman, and remainder of time Asst. on cost of haul statistics and reports, revision of grades, calculations, plans and reports: April 1902 to date with Schuylkill Navigation Co., Philadelphia, until Sept. 1911 as Asst. Engr., in charge (under Edwin F. Smith, Gen. Mgr.), of repairs and maintenance of all classes of canal structures, such as dams, aqueducts, waste weirs, locks, bridges (on State highways, public and farm roads); design and construction of head gates and feeders for water-power installations; calculations and plans for proposed enlarged water supply for P. & R. Ry. Co., and Reading Iron Co. at Reading, including reservoir, pumping and distributing mains; weir tests of turbine water wheels and hydraulic calculations; since Oct. 1911 Supt. and Engr. (succeeding Edwin F. Smith) in responsible charge of repairs and maintenance of same canal structures with operation of canal; also supervision of water supply to water power installations along Schuylkill River at Reading, Birdsboro, Phoenixville, Norristown and Manayunk: since March 1897 also assisted on preparation of calculations, plans and reports relating to water-power litigation and other engineering subjects, including plans and estimates for timber dam, abutments and guard walls, Sissiboo Pulp & Paper Co., Weymouth Bridge, Nova Scotia (1900); examination of plans and construction of New Croton Dam and Jerome Park Reservoir, New York Water Supply, by Board of Engrs. (1901); plans for rebuilding dam and water power feeder, Borough of Media, Pa. (1904), and for raising reservoir embankment, including retaining wall, Norristown (Pa.) Water Co. (1910); plans, specifications and estimate for alteration to top of Nanticoke Dam, Susquehanna River, Nanticoke Power Co. (1906); reports on proposed low dam in Susquehanna River, Harrisburg, Pa., river front improvement (1907); report to Norfolk & Western Ry Co., litigation with U. S. Govt., encroachments along Tug River, including investigation of Wentworth flood discharge formula (1908); calculations, plans and report on water-power diversion, York Haven Paper Co., Susquehanna River (1911); plans and report on flood protection dyke, Susquehanna River, Wilkes Barre, Pa. (1912); calculations and reports in twelve water-power litigation cases in various counties in Pennsylvania. (Active practice 30.3 years:

Sub-Prof. work 6.1: Prof. work 24.2: Res. Ch. 16.2: Design 1.7). Refers to P. S. Baker, F. H. Dechant, W. Easby, Jr., J. S. Ely, E. L. Nuebling, E. B. Ulrich, S. T. Wagner.

OTWAY, PERCY MACEWAN—Care, The Engineers Club, Coventry St., London, W., England—(Age 40. Born St. George, Grenada.)—1902 received Senior Diploma in 343 Civ. Eng. from University Coll., Bristol (now Univ. of Bristol): 1903 and 1904 Articled Pupil to Lt.-Col. E. S. Sinnott, surveys for railways, roads, etc.; Res. Engr.

- (1) on works of construction in South Wales: 1904–1917 with Dick, Kerr & Co., Ltd., London, engineering work on construction of railways, tramways (conduit and overhead), roads, bridges, street improvements in and around London, heavy and deep foundations, water-works, large mains and pumping stations, sewerage, sewage-disposal works, destructors, main drainage tunnels, aqueducts, etc., being responsible for the following, among others: from 1910–1912 Res. Engr. in charge of construction of new pumping station (130 000 000 gal. per day), at Walton-on-Thames for Metropolitan Water Board, including engine house, boiler house (10 water tube boilers), economizer house, flues, brick smoke stack (175 ft. high), elevated steel bunkers (800 tons), housing accommodation for staff, drainage, etc. (approx. value of contracts £90 000); 1911–1912 also Metallurgical Laboratory and completion of Froude Naval Experimental Tank (550 by 30 by 13 ft.) and appurtenances at National Physical Laboratory (approx. value of contracts £30 000); 1912–1913 main drainage of Surbiton, including northern intercepting sewer and effluent drain (principally in tunnel), sewage-disposal works, including tanks, percolating filters (1 050 000 gal. daily), mains (3 to 15 in.) (approx. value of contract £80 000); 1913–1916 new pumping station for London County Council at southern outfall at Crossness, including large engine and pump houses, boiler house extensions, suction delivery and supply culverts in tunnel, penstock chambers, economizer house, buildings, etc. (value of contract approx. £80 000); 1914 to 1916 deep water pier, T head, fenders, dolphins, concrete rafts and river defence work, buildings, roads, drainage, brick settings for the 1st Trumble unit for Anglo-Saxon Petroleum Co., Ltd., at Shell Haven; Jan.–June 1917 Superv. Civ. Engr. on construction of aerodromes, engine repair depots, camps, etc., for Ministry of Munitions of War at Sheffield; June 1917 to 1923 Civ. Eng. and Chf. of Constr. Staff of Sarawak Concessions of Anglo-Saxon Petroleum Co., responsible, among other works, for the runway and pipe-laying and jointing of submarine pipe-line No. 2, reports on failure of and underpinning and restoration to stability of Trumble Unit No. 1, location and construction of about 17 miles of earth roads; Decauville Rys. No. 1 Slipway; Salome Dam impounding reservoir, all river wharves, bridges, ferry approaches, design of various foundations for pump house, etc., inception of Sungai Dalam Water Scheme and construction of barrage, etc., main drainage, construction of about 160 bungalows, administration offices, refinery laboratory and office buildings, etc.; various technical reports, including possibility of constructing harbor works at Miri-Lutong and tentative designs and estimates for construction of skeleton pier to the two-fathom contour in the China Sea (estimates submitted amounted to £1 750 000) and others similar (annual budget averaged over \$3 000 000, S. S.). (Active practice 21 years: Prof. work 21: Res. Ch. 7: Design 6). (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

PERRY, HORACE BURR—41 Pond St., South Weymouth, Mass.—(Age 30. Born New Haven, Conn.) (Ph. B., Sheffield Sci. School, 1916.)—Summer 1916 (nearly 4 months) 344 Instrumentman, City Engr.'s office, New Haven, Conn.: 1916 to 1917 (nearly 9 months) post graduate work in Civ. Eng., Sheffield Scientific School; Jan. 1918 to April 1920 (2) Instrumentman, acting as Chf. of Party and Chf. Draftsman, Bureau of Yards and Docks, U. S. Govt., submarine base, New London: April 1920 to date Asst. Civ. Engr. with Jackson & Moreland, Boston; Res. Engr. on reinforced concrete and structural steel design, appraisal and investigations. (Active practice 7.1 years: Sub-Prof. work 0.8: Prof. work 6.3: Res. Ch. 2.2: Design 1.3). Refers to G. S. Burrell, E. H. Cameron, F. L. Ford, A. B. Hill, D. C. Jackson, W. D. Pence, J. C. Tracy.

PIERSOL, JOHN ALLISON—2459 Ashland Ave., Indianapolis, Ind.—(Age 30. Born Belle Vernon, Pa.) (C. E., Cornell Univ., 1917.)—Aug. 1917 to June 1919 2d Lieut., with 345 Battery A, 310th Field Artillery, U. S. Army in United States and France: Aug. 1919 to March 1921 Instrumentman and Jun. Asst. Engr., San. Dist. of Chicago, drafting and (9) design: March 1921 to date Asst. Engr. and Res. Engr., San. Dist. of Indianapolis, design and supervision of construction. (Active practice 6.2 years: Sub-Prof. work 3: Prof. work 3.2: Res. Ch. 2.4: Design 0.8). Refers to F. A. Barnes, O. L. Eltinge, C. H. Hurd, H. S. Jacoby, I. P. Kane, L. Pearse, L. C. Whittemore.

POOL, CHARLES LUNDY—State Board of Health, Concord, N. H.—(Age 27. Born Niagara Falls, Ont., Canada.) (S. B. Mass. Inst. Tech., 1923.)—June 1915 to June 1917 Asst. Engr., Newport News (Va.) Light & Water Co., on pipe-line construction, surveying and drafting, mechanical filter plant operation: Aug. to Nov. 1917 Draftsman, Naval Board (2) of Valuation for site of Hampton Roads (Va.) Naval Base, making plats and computations: Dec. 1917 to March 1919 Ensign, U. S. N. R. F., Public Works Dept., Hampton Roads Naval Base, in charge of government inspection of time and material in construction, one-half of time as Asst. and one-half of time as Prin.: June to Sept. 1920 Draftsman, C. E. Dept., Newport News Shipbuilding & Dry Dock Co.: June 1921 to date San. Engr., State Board of Health, Concord, N. H. (and Collaborating San. Engr., U. S. P. H. S.), in charge of inspection of water supplies under Chf. of Div. of Water Supplies, Foods and Drugs, and of all other sanitary engineering work under the Secretary. (Active practice 6.1 years: Sub-Prof. work 2.6: Prof. work 3.5: Res. Ch. 3.5). Refers to F. H. Cooke, L. S. Edwards, F. E. Everett, R. Fletcher, S. Pincus, G. L. Smith, C. M. Spofford.

POULSEN, VILHELM BURCHARD WEBER—Chf. Engr.'s Office, C. & O. Ry. Co., Richmond, Va.—(Age 39. Born Roskilde, Denmark.) (C. E., Pol. Inst., Copenhagen, Denmark, 1908.)—Feb. 1908 to April 1911 Eng. Asst., Dept. of Streets and Sewers, Copenhagen, Denmark, on street plans and surveys, design of reinforced concrete (5) structures; 8 months in military service: May 1911 to May 1912 and Nov. 1912 to May 1913 Draftsman and Designer, F. L. Smidth & Co., New York City, structural steel, timber and concrete structures for cement mills: May to Oct. 1912 Detailer and Checker, Riter-Conley Mfg. Co., Pittsburgh, Pa., shop drawings for steel mill buildings: May 1913 to June 1916 Structural Draftsman, Interborough Rapid Transit Co., New York City, designing and detailing steelwork for third tracking elevated lines, also station plans, plans for shoring and erection and substations: June 1916 to Aug. 1919 Structural Draftsman, Bridge Dept., Chesapeake & Ohio Ry. Co., Richmond, Va., designing, estimating and detailing bridges, turntables, grade separations, etc.; investigating strength of old bridges: Nov. 1919 to Jan. 1920 Asst. Engr. with Kuhlman & Winkel, Cons. Engrs., Denmark, railway location: March to June 1920 Structural Designer with Th. E. Murray, Cons. Engr., New York City, designing steelwork for power house: June 1920 to date with C. & O. Ry. Co., Chf. Engr.'s office, Richmond, until Feb. 1923 as Draftsman on plans and estimates for track work, buildings, undergrade crossings, miscellaneous structures, standards, investigations and reports of various kinds; then Designing Engr.: since Aug. 1923 Chf. Draftsman. (Active practice 14.9 years: Res. Ch. 9.2: Design 10.5). Refers to A. C. Copland, R. Evers, F. W. Gardner, C. Miller, O. E. Mogensen, J. P. Nelson.

RAISMAN, AARON ISRAEL—49 Lafayette St., New York City—(Age 50. Born New York City.) (C. E., School of Mines, Columbia Univ., 1898.)—Sept. 1898 to June 1900 (348) Rodman, Draftsman and Asst. to Inspector of Bridges, Central R. R. of New Jersey, surveys, construction, bridge design, etc.: June 1900 to date with Board of Rapid (1) Transit R. R. Commrs. of New York City, and its successors, Public Service Comm. for First Dist., Transit Constr. Comm., and Transit Comm., successively as Draftsman, Asst. Engr., Designing Engr. and Div. Engr. in charge of Designs Div., design of all kinds of rapid transit structures, subways, elevated railroads and subaqueous tunnels: between 1907 and 1916 Asst. Engr. and Designing Engr. in charge of subdivision of Designs Div.; since then in charge of Div. of Designs in charge of design work valued at about \$300 000 000. (Active practice 25.4 years: Prof. work 25.4: Res. Ch. 20.7: Design 24.7). Refers to S. Dahm, J. H. Myers, G. H. Pegram, R. Ridgway, D. L. Turner.

RICHARDSON, ENCELL CAMPBELL—618 City Hall, Cleveland, Ohio—(Age 33. Born Cleveland, Ohio.)—Student, Case School of Applied Science (1910-1911), and Univ. of 349 Kansas, Mun. and San. Eng. course (1911-1914): summer 1913 (4 months) Rodman for Geo. M. Garret, C. E., Cleveland, Ohio: autumn 1913 (3 months) on sanitary survey (9) of sewer system of Topeka, Kans., for Russell Sage Foundation of New York City: June 1914 Draftsman for R. Winthrop Pratt, Cons. San. Engr., Cleveland: July 1914 to July 1916 Transitman in charge of field party, Div. of Water, Cleveland, on construction of West Side Water Filtration Plant, including giving of line and grade on construction of chemical house, coagulation basins, etc.: July 1916 to Aug. 1918 Asst. Engr., New York, Chicago & St. Louis R. R., Dept. of Grade Crossing Elimination, Cleveland, on design of track drainage system of sewers for elimination of grade cross-

ings, elimination of grade crossing at Ivanhoe Rd., construction of Ivanhoe Rd. bridge (concrete and steel) on main line of railroad (under traffic), raising of main tracks (under traffic) 6 ft. for 2 miles, and construction of numerous industrial tracks; approx. 1 year in actual charge of Ivanhoe Rd. work: Aug. to Dec. 1918 with U. S. Army, Engr. Corps, R. R. Constr. Unit, in training at Ft. Benjamin Harrison, Ind.: Jan. 1919 to date Senior Asst. Engr., Div. of Eng. and Constr.; Engr. of sewer design, Cleveland (Active practice 10.2 years: Res. Ch. 6.2: Design 6.2). Refers to G. B. Gascoigne, G. W. Hamlin, W. L. Havens, R. Hoffmann, A. V. Ruggles.

ROBERTSON, FRANK BRODNOX—738 Boissevain Ave., Norfolk, Va.—(Age 40. Born Richmond, Va.)—1903 to 1907 (4 years) Rodman and Instrumentman, Central of 350 Georgia Ry. Co.: 1907 to 1908 (1 year) with Lockwood, Greene & Co., in charge of field party on water power development, Ocmulgee River, Ga.: 1909 to 1910 (6 months) on maintenance, Seaboard Air Line R. R.: 1910 to 1911 (1 year) Chf. of Party on water-power development, with H. G. Scales, Cons. Engr.: 1911 to 1912 (1 year) in charge of field party on water-power development on Little Tennessee River, Knoxville Power Co.: 1912 to 1914 (2 years) Inspector of masonry and Instrumentman, Virginian Ry. Co., had charge of concrete lining of several tunnels, concrete culverts, etc.: 1915 to 1917 (2 years) with E. I. DuPont de Nemours Co., Hopewell, Va., as Supt. on night duty in entire charge of all mechanical equipment on plant, then on day work, in charge of work employing about 200 men: 1917 to 1920 (3 years) with War Dept., Engrs., in railroad yards at Portlock, Va.; March 1918 became Asst. in charge of engineer depot, Lamberts Point, Norfolk, Va., had entire charge of Elec. Dept. track plumbing, pipe-fitting and carpenters, also all cranes; after Oct. 1919 also took over all work of Gen. Supt. of Army Base; designed and installed laundry and all machinery: 1920 to 1921 in charge of dredging proposition, City of Norfolk: 1921 to 1923 in private practice: Oct. 1923 to date with Virginian R. R., at Sewells Point on erection of new piers. (Active practice 17.4 years: Sub-Prof. work 4: Prof. work 13.4: Res. Ch. 11.9: Design 5). Refers to D. A. Decker, B. H. Fowle, Jr., F. F. Harrington, J. O. Miller, R. M. Miller.

ROCKETT, LOUIS CHARLES—Santa Fe, N. Mex.—(Age 35. Born Chicago, Ill.) (B. S. in C. E., Univ. of Wis., 1915.)—May 1915 to Nov. 1917 Rodman, Transitman, Drafts- 351 man, Computer and Estimator, Madison (Wis.) Div., Chicago & North Western Ry.: Nov. 1917 to June 1918 and Jan. 1919 to July 1922 on field surveys, drafting, designing, (11) computing and estimating, Wisconsin Highway Comm., until June 1918 with Div. No. 5, at La Crosse, Wis., and after Jan. 1919 with Div. No. 3, at Green Bay, Wis., as Asst. Div. Engr.: July 1922 to date Highway Engr., U. S. Bureau of Public Roads, Dist. No. 13, Santa Fe, N. Mex. (Active practice 8.1 years: Sub-Prof. work 1.3: Prof. work 2.8: Res. Ch. 2.5: Design 1.5). Refers to G. T. P. Beattie, C. G. Morrison, O. C. Rollman, N. A. Saigh, M. W. Torkelson, F. E. Turneure, L. F. Van Hagan.

SCHWADA, JOSEPH PHILIP—1024½ Nineteenth St., Milwaukee, Wis.—(Age 36. Born Milwaukee, Wis.) (B. S. in C. E., Univ. of Wis., 1911.)—June to Sept. 1908 Chainman 352 and Rodman, City Engr.'s office, Milwaukee, Wis.: June to Sept. 1909 Material Clerk in Milwaukee City Pipe Yard, keeping account of materials for water distribution system, (7) making inventories, etc.: June to Sept. 1910 Rodman, Chainman and Engr. in charge of party on roadway and track resurveys, T. M. E. R. & L. Co., Milwaukee: June 1911 to Jan. 1912 Inspector and Field Engr. on surveys and plans for grade separation and on valuation work of small steam roads, Wisconsin State Dept. of Eng., Madison, Wis.: Jan. to Sept. 1912 Structural Designer, Dept. of Bridges and Bldgs., Chicago, Milwaukee & St. Paul Ry. Co., Chicago, Ill., designing and detailing reinforced concrete culverts, arch bridges, etc.: Sept. 1912 to Nov. 1916 Instructor in Structural Eng., Univ. of Wisconsin: June to Sept. 1913 Engr. in charge of field party on appraisal of roadway and track, State Dept. of Eng., Madison, Wis.: June to Sept. 1914 same work on Bay State St. Ry. Co., Boston, Mass., for Huddle, Sloan, Feustel & Freeman Co. of Madison: June to Sept. 1915 Inspector on construction of sewers, City of Madison, Wis.: June to Sept. 1916 private work, designing two sewage-disposal plants for Peter Hurtgen, Engr., Kenosha, Wis.: Nov. 1916 to Feb. 1918 Engr., Wisconsin State Dept. of Eng., structural work, special investigations and studies on engineering matters, appraisal work, investigation of dams, bridges, etc.: March 1918 to Feb. 1919 designing concrete ships, also Asst. Engr. in charge of such design, Emergency Fleet Corporation, Philadelphia, Pa.: March to Dec. 1919 Inspector in concrete shipyard and then Asst. Res. Representative in charge of shipyard, Emergency Fleet Corporation, Jackson, Fla.: Jan. 1920 to April

1921 Engr. in charge of field and office work on appraisals in connection with rate cases, Wisconsin State Dept. of Eng.: May 1921 to date with City of Milwaukee, until April 1923 as Engr. in charge of design and construction of new Riverside Pumping Station (138 000 000 gal. daily) for high- and low-service districts, in active charge of layout of station, design and construction of building, station equipment, station distribution system, etc.; since April 1923 City Engr. in complete charge of engineering matters pertaining to planning and construction of water-works, charge of plans and construction of bridges on grade separation work and of engineering matters pertaining to planning and construction of street improvements, plans for sewers and of all survey work in connection with city improvements and various special engineering matters. (Active practice 12.8 years: Res. Ch. 4.3: Design 6.4). Refers to J. Glaettili, Jr., C. M. Larson, W. E. Miller, E. L. Pfanz, J. C. Pinney, F. E. Turneure, L. F. Van Hagan.

SEASHORE, PAUL THEODORE—Box 662, San Antonio, Tex.—(Age 25. Born Grand Forks, N. Dak.)—Aug. 1917 to June 1919 with Air Service, U. S. Army: Sept. 1919 to June 1921 and Sept. 1922 to Jan. 1923 student, School of Civ. Eng., Univ. of Texas: June to Dec. 1921 Asst., State Reclamation Dept., Texas-Oklahoma Boundary Suit Survey, (15) mechanical analyses of soils, maps, drafting, instrument work, etc.: Dec. 1921 to Sept. 1922 and one-half of time from Sept. 1922 to Jan. 1923 Asst., in charge of Sub-Surface Laboratory, Bureau of Economic Geology and Technology, Univ. of Texas, examination and classification of well cuttings, map and geologic section drafting: March 1923 to date Hydrographer, State Board of Water Engrs., seepage loss investigations. (Active practice 2.3 years: Sub-Prof. work 2.3). Refers to C. S. Clark, O. A. Faris, R. G. Hemphill, J. A. Norris, A. A. Stiles.

SHIFRIN, HYMEN—300 City Hall, St. Louis, Mo.—(Age 31. Born St. Louis, Mo.) (B. S. in C. E., Washington Univ., St. Louis, Mo., 1913.)—June to Dec. 1913 Jun. Engr., 354 Illinois Highway Dept., on construction of reinforced concrete bridges and culverts: Jan. to Oct. 1914 Sales Engr., Laclede Christy Clay Products Co., Mfrs. of Fire Brick: (14) St. Louis, Mo., detailing special shapes of fire-clay linings, engineering correspondence: Oct. 1914 to May 1917 Engr. on sewer design, Div. of Sewers and Paving, St. Louis; designed and prepared plans of relief sewers for old parts of the city, and on data for percentage of runoff on pervious and impervious area for various intensities of rainfall: May 1917 to June 1919 with U. S. Army, at Engr. Officers' Training Camp, Ft. Riley and Ft. Leavenworth, as 2d Lieut., 314th Engrs. (Sept. 1917 to May 1918) at Camp Funston: June 1918 to June 1919 1st Lieut. with same regiment in France and Germany: July 1919 to June 1922 Engr. on sewer design, Div. of Sewers and Paving, St. Louis, designed and prepared plans and special details for combined sewer systems; occasionally supervised construction, and part of time on design of streets: June 1922 to date Prin. Asst. to Chf. Engr., Sewers and Paving, St. Louis, supervising plans and specifications of streets and sewers and assisting Chf. Engr. in conducting and supervising work of the Division, Dept. of the President, Board of Public Service. (Active practice 10.6 years: Design 5.5). Refers to G. G. Black, W. R. Crecelius, W. W. Horner, E. R. Kinsey, W. E. Rolfe, E. O. Sweetser, J. L. Van Ornum.

SKELTON, ALBERT GORDON—Box 405, Astoria, Ore.—(Age 27. Born Corvallis, Ore.) (B. S. in C. E., Ore. Agri. Coll., 1917.)—May 1917 to Aug. 1919 2d Lieut., U. S. 355 Marine Corps; 2d Lieut., 1st Lieut. and Capt., 2d Div., in France and Germany; on short detail with 2d Engrs. during battle of St. Mihiel, remainder of time with 6th (12) Marines: Sept. 1919 to date with Bridge Dept., Oregon State Highway Comm., until Aug. 1920 as Res. Inspector on Molalla River Bridge (three 80-ft. deck steel spans, concrete and wooden approach, cost \$60 000); since then Res. Engr., in responsible charge on new timber approaches to Morrison St. Bridge, Portland, Ore. (cost \$40 000) (Sept. to Nov. 1920), fifteen wooden trestles and truss spans on John Day Highway (total cost \$120 000) (Nov. 1920 to Oct. 1921), and four bridges on Pacific & Willamette Valley-Florence Highways near Eugene, Ore. (one 150-ft. steel span and three wooden spans, total \$60 000) (Oct. 1921 to March 1922); acted as Asst. Res. Engr. in charge of concrete and steel placement on Oregon City Arch (350-ft. steel arch with reinforced concrete approach, cost \$270 000) (March to Aug. 1922); Res. Engr. on Winchester Bridge (seven concrete arches and concrete approach, cost \$130 000) (Aug. 1922 to March 1923), and Res. Engr. in responsible charge on repairs to Morrison St. Draw Span, Portland (cost \$60 000) (March to June 1923), and Lewis and Clark Bridge (100-ft. clear opening single-leaf Bascule span and 725 ft. of wooden trestle approach,

—estimated cost \$185 000) (since June 1923). (Active practice 4.4 years: Sub-Prof. work 0.9: Prof. work 3.5: Res. Ch. 2.5). Refers to P. A. Franklin, R. A. Klein, C. B. McCullough, H. Nunn, G. S. Paxson, M. W. Rosecrans.

SKINNER, ALFRED EDWIN—53 West Jackson Blvd., Chicago, Ill.—(Age 39. Born Jersey City, N. J.) (M. E., Stevens Inst. Tech., 1908.)—June 1908 to May 1913 with Bartlett-356 Hayward Co., Baltimore, Md., first as Timekeeper and Material Clerk, then Supt. in charge of construction work around Chicago; had charge of erection of complete gas (8) plant and gas holders in various parts of the country: May 1913 to Feb. 1914 Ill: Feb. to May 1914 Appraisal Engr. with W. J. Willgus, Cons. Engr., New York City, compiling and appraising Lehigh Valley R. R. Co.; had charge of final compilation of entire properties: June to Sept. 1914 Asst. Engr., The Pitometer Co., New York City, on survey of Trenton (N. J.) Water-Works: Sept. 1914 to Feb. 1915 Appraisal Engr., New York Telephone Co., New York City, under Cons. Engr., had complete charge of appraisal of outside plant of Central Div. at Syracuse, N. Y.: June 1915 to April 1917 Sales Engr., J. L. Mott Iron Works, New York City, first as Sales Engr. in Hospital Dept., specializing in fixtures for hospitals, etc., finally in charge of Quotation Dept. of entire company: April 1917 to date Western Mgr., The Pitometer Co., New York City, first as Asst. Engr.; had charge of surveys of Joliet, Ill., Erie, Pa., Halifax, N. S., Shreveport, La., Sault Ste. Marie, Ont., Toledo, Ohio; then Mgr. of Kansas City office; at present at Chicago in charge of all work in Western States. (Active practice 14.3 years: Res. Ch. 9.5: Design 4.8). Refers to E. S. Cole, P. E. Green, J. B. Hawley, B. B. Hodgman, C. L. Keller, R. E. McDonnell, N. T. Veatch, Jr.

SLANTZ, FRED WILLIAM—Lafayette Coll., Easton, Pa.—(Age 34. Born Scranton, Pa.) (B. S. in C. E., Univ. of Pa., 1913.)—June 1913 to June 1915 Instructor, Lafayette 357 Coll., surveying and graphics, 6 months in charge of Dept. during absence of Prof. Otho M. Graves: June 1915 to Sept. 1916 Draftsman, Chesapeake & Ohio Ry.: Sept. (4) 1916 to Sept. 1917 Teacher, Asheville (N. C.) Boys School, physics and mathematics: Sept. 1917 to Sept. 1919 Capt., 22d F. S. Battalion, U. S. Army: Sept. 1919 to Sept. 1920 at Asheville Boys School: Sept. 1920 to date Asst. Prof. in charge of Dept. of Graphics, Lafayette Coll.; also on engineering and architectural work and text-book work. (Active practice 10.8 years: Sub-Prof. work 4.4: Prof. work 6.4: Res. Ch. 7.1). Refers to H. C. Berry, F. O. Dufour, W. S. Lohr, L. Perry, J. M. Porter, H. T. Spengler.

STRASBERGER, MAX JOSEPHUS—Sheridan Beach Hotel, Michigan City, Ind.—(Age 35. Born Kibartai, Lithuania.) (B. S., Cooper Union, 1916.)—June to Dec. 1916 Draftsman, 358 McClintle-Marshall Co., Carnegie, Pa., detailing industrial plants: Dec. 1916 to Feb. 1919 Draftsman with Heyl & Patterson, Pittsburgh, Pa., on design of ore bridges, (9) traveling tower cranes and industrial plants: March 1919 to Feb. 1920 Squad Boss, Morgan Eng. Co., Alliance, Ohio, on traveling gantry and overhead cranes: Feb. to June 1920 and Aug. to Dec. 1920 Checker, American Bridge Co., Gary, Ind.: June to Aug. 1920 and Feb. to April 1921 on design with Ralph Modjeski, Cons. Engr., Chicago: June 1921 to Jan. 1922 Draftsman, Grindel Fuel Equipment Co., Harvey, Ill., hoppers and plant framing: Feb. 1922 to Feb. 1923 Chf. Draftsman, and Feb. 1923 to date Chf. Engr., Steel Fabricating Corporation, Mfrs. of Industrial Plants: Licensed Structural Engr., State of Indiana. (Active practice 7.7 years: Sub-Prof. work 0.5: Prof. work 7.2: Res. Ch. 5.2: Design 2). Refers to W. E. Angler, C. D. Conklin, Jr., F. W. Dencer, F. E. Foss, C. K. Harvey, R. Modjeski.

TAYLOR, RALPH JAYNE—183 Elm St., Yonkers, N. Y.—(Age 24. Born New York City.) (B. S. in C. E., N. Y. Univ., 1924.)—June to Oct. 1920 and Nov. 1921 to Aug. 1922 359 surveying, field and office work, June to Nov. 1921 complete charge of construction of concrete highway bridge, Feb. to March 1922 complete charge of concrete sidewalk and curb construction, and Aug. to Oct. 1922 Inspector of water system at Elmsford, (1) N. Y., all for Wulff Eng. Co. (Active practice 1.7 years: Sub-Prof. work 1.2: Prof. work 0.5). Refers to A. Haring, E. G. Hooper, D. C. Nolan, Jr., C. T. Schwarze, C. H. Sells, C. H. Snow.

TINER, WAYNE DARWIN—612 Calcasieu Bldg., San Antonio, Tex.—(Age 22. Born Uvalde, Tex.) (B. S. in C. E., Tex. Agri. and Mech. Coll., 1923.)—June 1923 to date Office (7) 360 Asst., The Terrell Bartlett, Engrs., Inc., San Antonio, Tex. (Active practice 0.6 year). (15) Refers to C. T. Bartlett, B. Bird, J. S. Fenner, R. S. Fessenden, J. J. Richey.

TOMPKINS, JOHN ANDERSON BAUSH, Jr.—1841 Eighty-fourth St., Brooklyn, N. Y.—(Age 35. Born Milwaukee, Wis.) (B. C. E., Univ. of Mich., 1915.)—May to Oct. 1912

361 Rodman, Chicago & Northwestern R. R.: Oct. 1912 to May 1913 Asst. Instrumentman, Chicago, Milwaukee & St. Paul R. R.: May to Oct. 1913 Recorder, U. S. Engr. Office,

- (1) Milwaukee, Wis., on triangulation, stadia survey, Milwaukee Harbor, field and office: July 1915 to Dec. 1916 Surveyman, same office, also inspection of materials of construction and supervision of fabrication of steel structures: Dec. 1916 to May 1917 Inspector of bodies, booms, dippers, etc., Bucyrus Steam Shovel & Dredge Co., South Milwaukee, Wis.: Aug. 1917 to Aug. 1919 with U. S. Army, until April 1918 as Master Engr., Sr. Grade, 108th Engrs., on various engineering construction at Camp Logan, Tex., then Lieut., Engrs., on narrow-gauge railroad maintenance, Meuse-Argonne, Commanding Officer, Co. D, 544th Engrs. detachment, reconstruction and maintenance of 24-km. of roads, Loir et Cher: May 1920 to May 1921 Jun. Engr. with Morris Knowles, Inc., Pittsburgh, Pa., real-estate subdivisions, parks and playgrounds, grading plans, details and estimates: May to Aug. 1921 Draftsman, Technical Advisory Corporation, New York, miscellaneous work on city plans and building zone studies and maps: Aug. 1921 to date Res. Engr., same Corporation, Springfield and New Bedford, Mass., New Haven, Conn., and Elizabeth, N. J., zoning, equalization of land tax valuations, street traffic and transit, railroad station and track relocation, school location and building program, park and playground and fire station locations, growth and distribution of population, municipal services, etc. (Active practice 9.2 years: Sub-Prof. work 3.8: Prof. work 5.4: Res. Ch. 3.6: Design 1.8). Refers to H. F. Bucher, A. Daniels, E. P. Goodrich, M. Knowles, N. P. Lewis, M. W. Williams.

TUAN, WEI—200 Claremont Ave., New York City—(Age 25. Born Mengwha, Yunnan, China.) (B. S., School of Civ. Eng., Purdue Univ., 1923.)—Aug. to Dec. 1921 on survey

362 work, and Inspector on road construction, New York State Highway Dept.: Jan. to July 1922 Draftsman, American Car & Foundry Co., Buffalo, N. Y., and Wilmington,

- (1) Del.: Oct. to Dec. 1922 Draftsman, Baldwin Locomotive Works, Philadelphia, Pa. (Active practice 1.2 years). Refers to W. K. Hatt, K. Y. Kwong, C. M. Spofford, R. B. Wiley, P. S. Wu.

VAN TRUMP, ISAAC—2337 South Paulina St., Chicago, Ill.—(Age 41. Born Wilmington, Del.)—1902 graduated as Chemist, Drexel Inst. of Technology, Philadelphia, Pa.: 1899

363 to 1901 (nearly 2 years) Asst. Chemist, Vulcanite Paving Co., Philadelphia, Pa., had charge of paving laboratory: 1901 to 1903 (2½ years) Chf. Chemist, Barber Asphalt

- (8) Paving Co., Philadelphia, had charge of chemical laboratory and technical supervision of paving in Pennsylvania and New Jersey: 1903 to 1905 (1½ years) Research Chemist, New York Testing Laboratory, Long Island City, N. Y., in charge of special research work: 1905 to 1910 (4½ years) Dist. Chemist in responsible charge of bituminous paving for Barber Asphalt Paving Co. in middle United States and Mexico: 1910 to date (over 14 years) Cons. Chemical and Highway Engr. having private paving laboratory and inspection bureau; has responsible charge of design and types of street pavements and county roads in numerous municipalities, counties and states. (Active practice 24.8 years: Sub-Prof. work 3: Prof. work 21.8: Res. Ch. 18.9: Design 14.1). Refers to H. P. Andresen, W. E. Ford, W. L. Hempleman, J. B. Hittell, D. A. MacCrea.

VAN VALIN, HUESTIS BROWN—102 E. Morrell St., Jackson, Mich.—(Age 23. Born Parma, Mich.)—Oct. 1918 to June 1920 and Oct. 1921 to June 1922 student in Civ.

364 Eng., Michigan Agricultural Coll.: Feb. to May 1921 Chainman, Rodman and Draftsman with Ben F. DuPuy, on municipal surveys at Fullerton, Cal.: July to Oct. 1921

- (7) Chainman and Rodman on road surveys, Jackson County, Mich.: Aug. 1922 to April 1923 drafting and computing, Fargo Eng. Co., Jackson, Mich.: April 1923 to date Asst. Engr., Water Dept., Jackson, on distribution system extensions. (Active practice 2.1 years: Sub-Prof. work 0.6: Prof. work 1.5: Res. Ch. 0.5: Design 0.2). Refers to J. S. Bowman, B. F. DuPuy, W. G. Fargo, D. M. Hatch, E. Maerker.

WAGNITZ, MILTON FREDERICK—8035 Colfax Ave., Detroit, Mich.—(Age 29. Born Detroit, Mich.) (B. S. E. in C. E., Univ. of Mich., 1917.)—May to Nov. 1917 with

365 George A. Fuller Co., 1½ months as Inspector, on sewer construction at Quantico, Va., and 4 months Instrumentman: Nov. 1917 to June 1919 Private, Co. G, 23d U. S.

- (7) Engrs., Technical Regt., on road building, until March 1918 in training camp, U. S. Army, from April to June 1918 at Brest, France, supervising construction of water supply for troop ships and camps, involving pump station, reservoir and pipe-line; June

to Aug. 1918 at Gievres, France, setting up road-building machinery; Aug. 1918 to Feb. 1919 on road construction and repair at the Front, estimating quantities of materials; Feb. to May 1919 post-graduate work in water supply, Beaune Univ., Cote d'or France, A. E. F. School; July 1919 to date with City Engr.'s office, Detroit, Mich., until Feb. 1921 as Draftsman in Paving Dept. (over 1 month) and in Sewer Dept. (1½ years); Feb. 1921 to March 1923 Draftsman, Senior Grade, designing sewer systems, pumping stations, diversion chambers, bellmouths, etc.; at present Senior Asst. Civ. Engr., Div. of Sewer Design, supervising and checking sewer designs, writing specifications and investigations; Registered Civ. Engr., State of Michigan. (Active practice 6 years: Sub-Prof. work 2.4: Prof. work 3.6: Res. Ch. 1.5: Design 1.6). Refers to J. M. Hartgering, J. R. Hendry, C. W. Hubbell, W. D. McFarlane, J. W. Reid, R. B. Wiley.

WALSH, ARTHUR JAMES—98 Grove St., Lowell, Mass.—(Age 32. Born Beverly, Mass.)—1911 to 1913 (2 years) Rodman and Instrumentman with Wm. J. Berry, Beverly, Mass.: 366 1913 to 1915 (2 years) Surveyor and Draftsman, Beverly Gas & Elec. Co., on layout of electric transmission lines and gas mains: 1915 to 1916 (1 year) Constr. Engr., (2) Manchester (N. H.) Traction Light & Power Co., supervising construction of underground transmission electric lines: 1916 to 1917 (1½ years) Constr. Engr., Beverly Gas & Elec. Co., in charge of new construction at plant: 1917 to 1918 (1½ years) Supt. of Constr. with Connolly Bros., Beverly Farms, Mass., construction, supervision and design of estates: 1918 to 1919 (over 9 months) on inspection of building and wharf construction, Fay, Spofford & Thorndike, Boston, Mass.: 1919 to 1920 (1½ years) Draftsman, Checker and Designer, Harry M. Hope Eng. Co., Boston, on reinforced concrete and steel buildings: 1920 to 1921 (over 7 months) designing, estimating and construction (private work): 1921 to date (nearly 2½ years) in charge of new construction at plant, Lowell (Mass.) Gas Light Co., on design and construction in remodeling gas plant. (Active practice 13.3 years: Sub-Prof. work 2: Prof. work 6: Res. Ch. 4.3: Design 1). Refers to R. C. Allen, T. A. Appleton, W. W. Clifford, F. C. Millsaugh, G. G. Shedd.

WEBER, JOSEPH CLARENCE, Jr.—996 Exchange St., Rochester, N. Y.—(Age 26. Born Rochester, N. Y.)—Aug. 1916 to July 1920 Locomotive Fireman and Trainman, Buffalo, 367 Rochester & Pittsburgh Ry.: June to Aug. 1922 Fireman, James Stewart Co., on harbor deepening on Barge Canal Harbor at Rochester: Aug. 1922 to March 1923 Rodman and (3) Instrumentman, Dept. of Eng., Rochester: March to June 1923 Instrumentman with G. R. Newell, Engr. and Surveyor, Rochester: June to July 1923 with Scott Bros. on erection of steel beams in subway deck at Rochester: July 1923 to date Instrumentman, Rochester Gas & Elec. Corporation, on preliminary survey, Mt. Morris Power and Storage Dam. (Active practice 3.8 years: Sub-Prof. work 3.1: Prof. work 0.7). Refers to C. C. Cooman, N. H. Davidson, F. J. Howes, C. A. Poole, P. F. Stephens.

WELLS, AYARD WILLIAM—145 West 43d St., New York City—(Age 27. Born Moncton, N. B., Canada.)—Dec. 1914 to July 1916 Rodman, and July 1916 to June 1920 Instrumentman, Canadian National Rys.: June 1920 to Dec. 1922 Draftsman and Instrumentman on railway work, coal mining and topographical maps, Dominion Coal Co., Ltd., (1) Glace Bay, N. S., Canada: Jan. 1923 to Feb. 1924 with Compañia Azucarera Dominicana, Estate Consuelo, San Pedro de Macoris, R. D., Santo Domingo, as Asst. to Supt. of Constr. and Maintenance on railway construction and maintenance, canal work and farm drainage. (Active practice 9.3 years: Sub-Prof. work 1.8: Prof. work 7.5: Res. Ch. 7.5: Design 1). Refers to N. T. Ashkins, C. B. Brown, E. G. Evans, J. H. McCarthy, H. C. Stevens.

WINTER, HUGO HERMAN—6199 Roy St., Los Angeles, Cal.—(Age 28. Born San Diego, Cal.)—1913 graduated, Eng. court, Los Angeles Polytechnic High School: took special 369 courses and extension course at Univ. of California, Univ. of Wisconsin and Univ. of Southern California, especially in structural engineering and reinforced concrete: (11) Sept. 1913 to Feb. 1917 Structural Draftsman, Baker-Shippey Mfg. Co., Los Angeles, structural work, designed and detailed structures and machines from preliminary sketches and ideas: Feb. to Sept. 1917 Structural Draftsman, Baker Iron Works, Los Angeles, structural steel design, buildings, traveling cranes, gravel plants: Sept. 1917 to April 1918 Asst. Civ. Engr., Eng. Dept., Div. of Bridges and Structures, Los Angeles, design and plans for special structures of wood, steel and reinforced concrete in connection with street improvement, sewer and maintenance work: April 1918 to April 1919 special

Hanson service, 364th Inf., U. S. Army: May 1919 to date Asst. Civ. Engr. and Structural Engr., Eng. Dept., Div. of Bridges and Structures, Los Angeles, design of municipal structures, including oil-heating and storage plant, revision of City's asphalt plant to double capacity; three sewage pumping plants (original design), 10-ton traveling crane with mill building housing it, garbage loading station with 2-holst 5-ton electric traveling crane and spur track layout and truck garages; design for rock-crushing plant for San Fernando Valley, for 2-story brick testing laboratory, machine shop, and various wood and concrete bridges; design and plans for 1080-ft. reinforced concrete girder approach to new Ninth St. Viaduct; at present designing 215-ft. reinforced concrete arch spur for new Macy St. Viaduct, etc.; for past 2 years in responsible charge of work. (Active practice 10.2 years: Res. Ch. 2: Design 7.7). Refers to M. Butler, J. A. Griffin, W. T. Knowlton, A. LeVan, W. C. Sawyer, W. D. Smith, R. W. Stewart, J. C. Wright.

YOUNGBERG, GILBERT ALBIN—U. S. Engr. Office, P. O. Drawer 45, Jacksonville, Fla.—(Age 49. Born Belle Creek, Minn.) (U. S. Mil. Acad., 1900, Gen. Staff Coll., U. S. 370 Army, 1906; Army War Coll., 1910.)—Jan. 1900 became 2d Lieut. of Artillery, U. S. Army; July 1901 promoted to 1st Lieut. of Artillery; Jan. 1902 transferred to Corps (10) of Engrs. as 2d Lieut. with rank as 2d Lieut. from Feb. 1901 and as 1st Lieut. from May 1901; June 1907 became Capt. and Sept. 1913 Major; promoted to Lt.-Col. with temporary rank Aug. 1917 to Jan. 1918; appointed Col. of Engrs., National Army, Aug. 1917, accepted as of Jan. 1918; June 1920 honorably discharged and reverted to rank of Lt.-Col., Corps of Engrs., Regular Army; work involved knowledge of military engineering and employment of engineering troops thereon; 1902-1903 and 1903-1904 Instructor, Dept. of Eng., Gen. Service Schools, Ft. Leavenworth, Kans.; 1905-1906 Student Officer, Gen. Staff Coll.; about Nov. 1906 to March 1907 Div. Engr. of Northern Div., U. S. Army, at Chicago, Ill.; March 1907 to April 1909 in Cuba, over 1 year in charge of construction of macadam highway across mountains from Pinar del Rio to Vinales, involving location of road, design of bridge piers and abutments, small concrete bridges and culverts, and acted as Designing and Constr. Engr., Inspector, Auditor and Gen. Mgr. although the work was nominally done by a contractor; summer 1909 superintended surveys having to do with plans for land defenses of Boston and vicinity; 1909-1910 at Army War Coll.; Nov. 1910 to Aug. 1914 at U. S. Military Acad. as Head of Dept. of Practical Mil. Eng. and Signaling with title of Instructor (in 1914 changed to Prof. with rank of Lt.-Col.); Aug. 1914 to July 1917 Dist. Engr. in charge of U. S. Engr. Dist. at Charleston, S. C., having charge of the river and harbor improvements, also of fortifications pertaining to defenses of Charleston; Feb. 1917 had charge of raising German freighter sunk in channel of Charleston Harbor; July 1917 to May 1918 Executive Officer and Prin. Asst. to Chf. Engr., A. E. F.; principally on plans for organization of special engineer troops for the front and procurement and distribution of engineering materials for troops; May 1918 to June 1919 with 4th Sec., Gen. Staff, G. H., A. E. F., as Deputy to Asst. Chf. of Staff in charge of the section, having had charge of general staff supervision of engineering operations in France, especially at the front, including detail of labor troops; directly responsible for distribution of all engineering materials needed by troops at the front; June 1919 to Aug. 1922 in office of Chf. of Engrs., U. S. Army, in charge of organization and training of engineering troops, training of young officers of Corps of Engrs. and of members of Reserve Officers' Training Corps at various technical schools of the United States; since Aug. 1922 Dist. Engr. in charge of U. S. Engr. Dist. embracing Peninsula of Florida, at Jacksonville, Fla., has charge of all river and harbor improvements within the peninsula and of certain fortifications at Key West, Fla. (Active practice 23 years: Prof. work 23: Res. Ch. 14: Design 14). Refers to L. H. Beach, W. M. Black, A. A. Fries, J. P. Hogan, W. B. Parsons, M. M. Patrick, H. Taylor.

FOR TRANSFER

FROM THE GRADE OF ASSOCIATE MEMBER

ALEXANDER, HENRY JAMES, Assoc. M. Am. Soc. C. E.—49 Lafayette St., New York City—(elected March 7, 1906.) (Age 49. Born Concord, N. H.) (S. B. in Civ. Eng., 371 Harvard Univ., 1900.)—July 1894 to Sept. 1896 Rodman and Transitman, Boston & Maine R. R.; June 1900 to Jan. 1901 Transitman, Massachusetts Highway Comm.: (1) Jan. to June 1901 Asst. Res. Engr., Chicago, Burlington & Quincy R. R., in charge of construction of 20 miles of double-tracking at Corning, Iowa; June 1901 to June 1908

Asst. Engr., New York Rapid Transit Comm. and its successor, the Public Service Comm., 1st Dist., New York State, in charge of subway construction, New York City, consisting of concrete arch, reinforced concrete, I-beam construction, and cast-iron tube: June 1908 to April 1910 Asst. Engr., on surveys and plans for future subways, April 1910 to Jan. 1912 Asst. Div. Engr. in charge of three sections of subway construction on Flatbush and Fourth Aves., Brooklyn, Public Service Comm., 1st Dist.; from Jan. 1912 to Nov. 1914 in charge of construction of all rapid transit construction in Borough of Queens, consisting of three elevated sections, one subway section, and one mile of reinforced concrete viaduct: Nov. 1914 to Sept. 1919 Asst. Div. Engr., Public Service Comm. and its successor, the Transit Constr. Comm., in charge of construction of four sections of subway in Manhattan, including construction of Broadway Subway under Times Sq. Station and 60th St. Subway under New York Central R. R. tracks at Park Ave.: Sept. 1919 to May 1921 in charge of preparing final estimates of subway construction for payment to contractors and compilation of Chf. Engr.'s determination of costs: May 1921 to July 1922 Asst. Div. Engr., Transit Comm., in charge of preparing appraisal of track and structures of all rapid transit and surface railroads in New York City: July 1922 to date in charge of Div. of Maintenance and Valuations of Transit Comm., New York State. (Active practice 25 years: Sub-Prof. work 2.2; Prof. work 22.8; Res. Ch. 19.3; Design 3). Refers to A. E. Clark, C. Gilman, J. P. Hogan, C. M. Holland, J. H. Madden, J. H. Myers, R. Ridgway, C. D. Searle, A. W. Tidd, D. L. Turner.

GIBSON, THOMAS FENNER, Assoc. M. Am. Soc. C. E.—257 South 44th St., Philadelphia, Pa.—(elected May 13, 1918.) (Age 32. Born Gibson, N. C.) (B. E. in Civ. Eng., 1912, 372 and C. E., 1915, N. C. State Coll.)—Summers 1910 and 1911 Architectural Draftsman, office of J. A. Parish, Archt., Maxton, N. C.: summers 1912 and 1913 and Sept. 1912 (4) to Feb. 1913 special work in Architectural Eng. at Columbia Univ.: Feb. to June 1913 Structural Draftsman, New Jersey Zinc Co., Palmerton, Pa., detailing structural steel for mill buildings and railroad track elevation over storage yards: Sept. 1913 to July 1914 Structural Designer, Passaic Valley Sewerage Commrs., Newark, N. J., on designs and estimates in reinforced concrete, structural steel and massive masonry pertaining to Passaic Valley Sewer, Newark Bay Pumping Station and Outfall Pressure Tunnel: July 1914 to June 1915 Structural Designer, Southern Power Co., Charlotte, N. C., on designs and estimates in reinforced concrete, structural steel and massive masonry pertaining to 30 000-h. p. hydro-electric development at Lookout Shoals near Catawba, N. C.: June to Nov. 1915 Chf. Draftsman, Standard Oil Co., Shanghai, China, on supervision of drafting room and designs for industrial building work: Jan. to May 1916 Structural Engr., office of Walter McCulloh, Niagara Falls, N. Y., in charge of designs for a group of reinforced concrete and steel factory buildings for Isco Chemical Co.: May to Aug. 1916 Structural Engr., Corrugated Bar Co., Buffalo, N. Y., on designs and details in reinforced concrete for industrial building work: Aug. 1916 to Jan. 1917 Structural Engr., Armour & Co., Chicago, Ill., on designs in reinforced concrete for cold storage and packing plants: Jan. 1917 to 1918 Structural Engr., Corrugated Bar Co., Chicago, until March 1917 as Chf. Designer and Estimator; then in charge of designs and drafting room; preparing designs and estimates in reinforced concrete where used as a structural material: March to Sept. 1918 Superv. Engr. in charge of reinforced concrete design, Constr. Div., U. S. Army, Washington, D. C., handled design for Quartermaster's Terminals, Philadelphia, and New Orleans, La., also numerous other building for the Division: Sept. 1918 to Feb. 1919 with Headquarters Co., 63d Inf., U. S. Army: Feb. to July 1919 Dist. Sales Engr., Corrugated Bar Co., Kansas City, Mo., sales and designs for reinforced concrete building and other structures: July 1919 to Jan. 1921 Structural Engr., Cramp & Co., Contrs., Philadelphia, in charge of designs, estimates and supervision of plans for buildings of steel and concrete: 1919 to 1921, also consulting engineering work: Jan. 1921 to Jan. 1922 Dist. Sales Engr., Western Waterproofing Co. of St. Louis, Mo., Philadelphia office: Feb. 1922 to date Dist. Sales Engr., Philadelphia Dist., Bldg. Materials Div., Gen. Chemical Co., New York City. (Active practice 10.9 years: Sub-Prof. work 1.3; Prof. work 9.6; Res. Ch. 7.1; Design 2.5). Refers to A. E. Lindau, W. McCulloh, C. A. Mees, A. P. Skaer, W. G. Taylor, W. S. Thomson.

GOULD, RICHARD HARTSHORN, Assoc. M. Am. Soc. C. E.—140 Nassau St., New York City—(elected July 6, 1920.) (Age 34. Born Newton Upper Falls, Mass.) (S. B. Mass. 373 Inst. Tech., 1911.)—July to Sept. 1910 with Massachusetts State Board of Health on records, inspection of streams, sewage-disposal works, etc.: July 1911–Dec. 1912 with

- (1) Emschergerossenschaft, Essen, Germany, on study and work in connection with Imhoff sewage tank and other sanitary works; took study trips to various foreign cities: Jan.-Dec. 1913 with R. J. Harding, Poughkeepsie, N. Y., as Prin. Asst. on plans for comprehensive sewerage and sewage disposal for Poughkeepsie, N. Y.; made designs for several small bridges and other structures; carried out surveys and other miscellaneous work: Jan. to March 1914 with Hazen & Whipple, Cons. Engrs., New York City, as Draftsman on various water supply and miscellaneous works: March 1914 to Sept. 1917 with James H. Fuertes, New York City, as Draftsman and Asst. Engr. on studies, design and field work in connection with plans and reports on various water supply, sewerage and miscellaneous work; Res. Engr. on construction of intercepting sewers, pumping station and sewage-disposal works for Dallas, Tex.; 4 months directed operation of these works: Sept. 1917 to June 1919 Flying Cadet and 2d Lieut., A. S. A., U. S. Army, in United States and France; carried out some aerial photography and mapping from air: June to July 1919 in charge of tuning up and operation of water filtration plant at Charleston, W. Va.: July 1919 to date Prin. Asst. Engr. with James H. Fuertes, Cons. Engr., New York, in connection with plans, specifications, reports, carrying out investigations and supervision of construction, chiefly in connection with water supply, sewerage, sewage disposal and stream protection works for various cities and towns: Oct. 1922 to June 1923 also Special Lecturer in Hydr. and San. Eng. to fourth year students in courses of Civ. and San. Eng. at Massachusetts Inst. of Technology. (Active practice 10.9 years: Sub-Prof. work 2: Prof. work 8.9: Res. Ch. 8.8: Design 4.7). Refers to J. H. Fuertes, W. E. Fuller, S. A. Greeley, R. J. Harding, A. Hazen, C. M. Spofford.

GRUPE, EDGAR YOUNG, Jr., Assoc. M. Am. Soc. C. E.—710 Bankers Reserve Life Bldg., Omaha, Nebr.—(elected Junior April 14, 1919; Assoc. M. Nov. 9, 1920.) (Age 30.)
 374 Born Lincoln, Nebr.) (B. S. C. E., Univ. of Nebr., 1915.)—1915 (1 year) and 1916 (6 months) Res. Engr. with Bruce & Standeven, Cons. Engrs., Omaha, Nebr., municipal engineering: 1916 (6 months) Draftsman, City Eng. Dept., Omaha: 1917 and 1918 Aeronautical Engr. in charge of drafting room and construction, U. S. Army Balloon School, Ft. Omaha, Nebr.: 1919 to date member of firm, Grupe & Walter (1 year) and Bruce & Grupe (past 4 years), Cons. Engrs., Omaha, municipal engineering. (Active practice 9 years: Res. Ch. 8.5: Design 8). Refers to J. A. Bruce, G. L. Campen, H. E. Cotton, D. R. Donlen, R. M. Green, G. T. Prince, F. W. P. Rice.

KILLMER, MILES ISRAEL, Assoc. M. Am. Soc. C. E.—23 Harvard St., East Orange, N. J.—(elected July 11, 1921.) (Age 41. Born Stouchsburg, Pa.) (B. S. in C. E., 1906, and C. E., 1909, Pa. State Coll.)—June 1906 to May 1910 with Pennsylvania R. R., 1 year as Rodman, and 3 years Inspector on tunnel construction, East River Tunnels, New York City: May 1910 to May 1911 Inspector of dredging, U. S. Govt., New York City: May 1911 to April 1913 farmer: April 1913 to Sept. 1914 Foreman on subway construction with Arthur McMullen, New York City: Sept. 1914 to May 1917 with Public Service Comm. of New York on construction of subaqueous tunnels from Whitehall St., New York City, to Montague St., Brooklyn, 4 months as Acting Res. Engr. and 2 years Shift Engr.: May 1917 to July 1919 Capt. of Engrs., U. S. Army, 17 months in A. E. F. as Supply Officer, 28th Engrs.: Aug. 1919 to date with New York and New Jersey Bridge and Tunnel Comms. on construction of vehicular tunnels from Canal St., New York City to Jersey City, N. J., nearly 1½ years as Asst. Engr. and 3½ years as Res. Engr. (Active practice 16 years: Sub-Prof. work 7.6: Prof. work 8.4: Res. Ch. 8.4). Refers to C. D. Drew, M. H. Freeman, C. M. Holland, O. Singstad, J. B. Snow, F. A. Snyder.

KING, ARTHUR CASWELL, Assoc. M. Am. Soc. C. E.—53 Railroad Ave., Taunton, Mass.—(elected Junior Sept. 4, 1906; Assoc. M. April 7, 1915.) (Age 40. Born Taunton, Mass.) (B. S. in C. E., Brown Univ., 1906.)—June to Sept. 1905 and June 1906 to March 1907 Eng. Asst., Massachusetts Dept. of Public Health, largely on examinations and tests of operation of sewage-filtration plants: March 1907 to April 1918 with Municipal Water Works, Springfield, Mass., 4 years as Transitman and Inspector on construction of intake and purification works of Little River water supply, and 7 years Supt.'s Asst. in charge of service construction and maintenance and underground records: April to Dec. 1918 Water Supply Engr., Emergency Fleet Corporation, Housing Div., on design of water systems for all eastern housing projects: Dec. 1918 to May 1919 Estimator, Lockwood, Greene & Co., on quantity calculations and cost estimates on sewerage and water systems for Yorkship Village (housing project for New York Ship-

building Co., Camden, N. J.; \$15 000 000): May to Aug. 1919 Draftsman and Salesman, A. H. Cutler Co., Mapleshade, N. J., real estate (not engineering work): Aug. 1919 to March 1920 Chf. of Party with Hartley L. White, general practice of surveying and engineering, both private and municipal work: March 1920 to date Civ. Engr., Mt. Hope Finishing Co., N. Dighton, Mass., on design and construction of subdivisions, parks, streets, drains and water system of housing development. (Active practice 17.5 years: Res. Ch. 7.5: Design 2.8). Refers to C. P. Collins, X. H. Goodnough, M. Knowles, E. E. Lochridge, C. M. Reppert, A. D. Weston, E. Wright.

MAHONE, FRANCIS DOUGLAS, Assoc. M. Am. Soc. C. E.—Roland Hotel, Bristow, Okla.—(elected Jan. 17, 1921.) (Age 38. Born Alameda, Cal.)—1904 to 1909 (4½ years) 377 student, Eng. Dept., Leland Stanford, Jr., Univ.: July–Oct. 1909 Asst. Engr. under Constr. Q. M., U. S. Army, design of buildings and construction of cantonment for Coast Artillery (15) at Ft. Ruger, Honolulu, Hawaii: Nov. 1909–March 1910 and Aug. 1910–Feb. 1911 Civ. Engr. and Supt. of Constr., Q. M. Dept., U. S. Army, Hawaii, until March 1910 on general engineering superintendence at Honolulu, and after Aug. 1910 in charge of construction of Schofield Barracks, Hawaii, buildings, water supply development, etc.: April–July 1910 Civ. Engr., Lord-Young Eng. Co., Ltd., Honolulu, engineering design of reinforced concrete buildings: March 1911–Aug. 1912 Civ. Engr. in Chg., Hawaiian Agricultural Co., Ltd., Pahala, Hawaii, design and construction of cane-carrying flumes, design of system for loading cars from flumes, design and layout of car yards, irrigation system, tunnel, etc.: Sept.–Oct. 1912 Asst. County Engr., County of Hawaii, street improvement, Hilo, Hawaii: Nov. 1912–June 1913 Associate with C. W. Girvin, Elec. Engr., Washington, D. C., design and development of invention for high-voltage continuous current generators: Sept. 1913–March 1914 Civ. Engr., associate with E. A. Southworth, C. E., swamp reclamation, improvement of streets, general engineering: April 1914–Jan. 1915 Civ. Engr. in Chg., Oahu Sugar Co., Ltd., Waipahu, Hawaii, railroad and highway location and construction, trestles, etc., irrigation work, distribution system for Waihole Tunnel, aqueduct, inverted syphons, dam design: Jan. 1915–May 1917 Associate with C. W. Girvin, Philadelphia, Pa., design, development and manufacture of high-voltage continuous current generators: July–Aug. 1917 Civ. Engr. on construction of Camp Fremont, Cal.: Aug. 1917 to July 1919 Officer of Field Artillery, A. E. F., Instructor in mathematics and artillery firing, Officers' School; C. O. Bty. C, 146th F. A. at Front and in Army of Occupation: Nov. 1919 to Aug. 1920 Civ. Engr., with E. A. Southworth, C. E., Monterey, Cal., design of inner harbor, breakwater, wharves, etc., city engineering: Nov. 1920 to date Engr., Petroleum Rectifying Co. of California, design and construction of electrical dehydrators of crude petroleum: 1922 (1 year) on research in Egypt; at present in sole charge in Oklahoma and Kansas. (Active practice 14.4 years: Sub-Prof. work 1.5: Prof. work 12.9: Res. Ch. 11: Design 10.3). Refers to C. H. Kluegel, W. Meredith, E. A. Southworth, J. T. Taylor, J. N. S. Williams.

MEANS, JOHN SIEMON, Assoc. M. Am. Soc. C. E.—1401 Lafayette St., Denver, Colo.—(elected Junior April 18, 1916; Assoc. M. March 9, 1920.) (Age 30. Born Pittsburgh, 378 Pa.) (B. S. in C. E., Univ. of Colo., 1915.)—June to Sept. 1911 and July to Sept. of 1913 and 1914 Rodman with H. S. Crocker: June to Sept. 1912 Machinist's (11) Helper, Holly Sugar Co., at Huntington Beach, Cal.: June to July 1913 Draftsman, Swift & Co., Denver: June 1915 to Dec. 1916 Engr. of Tests and Inspector with H. S. Crocker on Colfax-Lorimer Viaduct, testing aggregate and concrete and inspection of sidewalk, curb, stairways and handrail: Dec. 1916 to May 1917 Designer, Denver Tramway Co., on foundations, bridges and miscellaneous labor-saving equipment: May to Aug. 1917 Student Officer in 1st Officers' Training Camp at Fts. Riley and Leavenworth: Aug. to Nov. 1917 2d Lieut., Instructor (one of 12) for Engr. Officers at 2d E. O. T. C., at Ft. Leavenworth: Nov. 1917 to May 1918 Supply Officer, 508th Engrs., U. S. Army, handling all of supplies for the Battalion: May to Nov. 1918 Adj., 508th Engrs., on road work, barracks construction, S. G. R. R. construction and quarry work, also office administration in advance section, A. E. F.; July 1918 became 1st Lieut. of Engrs.: Nov. 1918 to Aug. 1919 Aide de Camp and Asst. Adj. to Chf. Engr., A. E. F., handled paper work of responsible character, including matters of policy and correspondence pertaining to office of Chf. Engr.; April 1919 became Capt. of Engrs.; from Jan. 1918 to July 1919 overseas: Sept. 1919 to Nov. 1922 with Colorado State Highway Dept., until July 1920 as Field Engr. on plans, profiles, estimates and bridge design for State and Federal Aid projects; then Bridge Engr. in charge of all bridge design; and after

- July 1921 Office Engr. in charge of plans and specifications for State and Federal Aid projects, with correspondence pertaining to the Eng. Div. (under J. E. Maloney); Nov. 1922 to date Res. Engr. with H. S. Crocker in charge of construction of 16th St. Viaduct (\$600 000, steel and reinforced concrete), Denver, Colo. (Active practice 8.9 years: Sub-Prof. work 2.6; Prof. work 6.3; Res. Ch. 5.7; Design 2.5). Refers to L. D. Blauvelt, H. S. Crocker, M. S. Ketchum, W. C. Langfitt, J. E. Maloney, O. T. Reedy.
- MORRISON, GILBERT, Assoc. M. Am. Soc. C. E.—31 Allison Ave., Yonkers, N. Y.—(elected Nov. 27, 1917.) (Age 39. Born Athena, N. J.) (B. S. in Civ. Eng., 1910, and 379 C. E., 1916, Pa. State Coll.)—June to Sept. 1904 Chairman and Rodman, Reading R. R.: June 1910 to Jan. 1911 Bldg. Inspector in Chf. Engr.'s Dept., Reading R. R., (1) at Philadelphia, Pa.: Jan. 1911 to April 1914 Bridge and Bldg. Inspector, New York Central R. R., at Jersey Shore, Pa., had charge, as Asst., of bridge and building repairs and strengthening, bridge and building construction and bridge replacement and renewals (under traffic): April 1914 to Sept. 1915 private work in general contracting at Williamsport, Pa., on building work, private and public; designed and erected two silk mills, made architectural plans and erected two private homes; completed contract for concrete pavements for school district of Williamsport for 1914, including new high school; made estimates on other work: Sept. 1915 to June 1916 Instructor in Arch. Eng. Dept., and Sept. 1916 to Jan. 1918 Instructor in Civ. Eng. Dept., Pennsylvania State Coll.: June to Sept. 1916 in charge of relocation surveys, Pennsylvania R. R., at Oil City, Pa.: June to July of years 1917 and 1918 Instructor at Stevens Inst., Hoboken, N. J.: Jan. to June 1918 Instructor in Civ. Eng. Dept., and Sept. 1918 to date Instructor in charge of structural design, Cooper Union, New York City: July to Aug. 1918 with Quantity Survey Co., New York City, taking off estimates for hotels, office, schools and other public buildings, including structures of reinforced concrete: Aug. to Nov. 1918 also in charge of structural steel changes and design in 59th St. Power House, Interborough Rapid Transit Co.: also, from April to July 1919 on structural steel design and checking and on subaqueous foundations for factory buildings; Austin Co., New York City; and July 1919 to Nov. 1921 on New Acorn Silk Co. Bldg., Long Island City, in full charge of field construction, complete with machinery installation (cost \$750 000): May to July 1921 with Francisco & Jacobus, Cons. Engrs., New York City, on structural steel design and checking and foundations of 23-story office building: also, Feb. to Aug. 1922 made architectural plans and erected private home in Yonkers, N. Y.; and Aug. to Oct. 1922 with Westchester County (N. Y.) Engr. on road work: May to Nov. 1923 also with H. G. Balcom, Cons. Engr., New York City, on structural designs and foundations for hospitals, office and bank buildings, and buildings over New York Central R. R. track on Park Ave. (Active practice 13.9 years: Sub-Prof. work 3.5; Prof. work 10.4; Res. Ch. 10.1; Design 5.5). Refers to H. G. Balcom, H. R. Codwise, C. Dillenbeck, F. E. Foss, R. I. Webber, H. T. Welty.
- PHELPS, TRACY IRWIN, Assoc. M. Am. Soc. C. E.—Prineville, Ore.—(elected Oct. 29, 1912.) (Age 42. Born Newtown, Pa.) (B. S. in C. E., Univ. of Mo., School of Mines 380 and Metallurgy, 1906.)—June 1906 to Dec. 1909 with U. S. Reclamation Service, Uncompahgre Valley Project, Colo., as Tool Clerk, Timekeeper, and (April 1907 to Dec. (12) 1909) Jun. Engr. on tunnel engineering, estimates, costs (April 1907 to Sept. 1908), in charge of tunnel engineering (East Portal), timekeeping, costs, estimates, hydrography (Oct. 1908 to April 1909); Asst. to Tunnel Supt., construction (May to Oct. 1909); in charge of tunnel engineering, reports, etc. (Nov. to Dec. 1909): Jan. to May 1910 Foreman, masonry dam hydro-electric development, and June 1910 Asst. Mine Supt., Lluvia de Oro Gold Mining Co., Chihuahua, Mexico: July 1910 to Oct. 1920 with U. S. Reclamation Service, until April 1911 as Jun. Engr., Transitman; then Asst. Engr., checking alignment and levels, 4 miles tunnel (May 1911); and in charge of field engineering on earth dam, tunnel, drag line excavation, concrete construction, tunnel, head-works, dam, etc., on Strawberry Valley Project (June 1911 to Dec. 1912); drafting, etc., Superv. Engr.'s office, Helena, Mont. (Jan.-Feb. 1913); on Milk River Project from March 1913 to March 1918, on office computation designs, estimates, inspection, etc., and in charge field contract construction, earth canals, revision, location, cross-sections, estimates, inspection, etc. (April to Nov. 1913), location laterals and wastewater ditches (Dec. 1913) and field staking structures, inspection concrete, estimates and contract claims (May to June 1914), also some drafting, O. & M. maps, farm unit plats, construction, estimates and claims, and design of canal structures, Glasgow Div.; preliminary lists and sketches for lateral system, design of laterals and structures, and in charge contract earthwork and structures (Feb. 1917 to March 1918), Saco Div.;

on King Hill Project, Idaho, from April 1918 to April 1919, on office layout of structures, canals, estimates, designs, concrete and wood stave pipe siphons, flumes, etc., in charge field engineering location concrete flumes, siphons, etc (June to Aug. 1918) and Constr. Engr., inspection concrete construction and wood stave pipe construction, concrete flumes and siphons (Sept. 1918 to April 1919); on Minidoka Project, Idaho, from May 1919 to Oct. 1920, until March 1920 as Asst. Engr., then Engr., Office Engr. and Acting Project Mgr. in Mgr.'s absence: Nov. 1920 to July 1921 with Ralph Schneeloch Co., Portland, Ore., as Engr. on examination, investigations, reports, valuations, etc., on irrigation projects or contemplated projects: Aug. 1921 to date Project Mgr., Ochoco Irrigation Dist., Prineville, Ore., on O. & M. water distribution, repairs to system on 22 000-acre project. (Active practice 17.5 years: Sub-Prof. work 1.7: Prof. work 15.8: Res. Ch. 10.6: Design 1.) Refers to B. Dibble, J. H. Fertig, C. H. Howell, I. W. McConnell, O. McDermith, G. E. Stratton.

SCHOBINGER, GEORGE, Assoc. M. Am. Soc. C. E.—Care, D. P. Robinson & Co., Inc., Calxa Postal 69, Rio de Janeiro, Brazil—(elected Junior Oct. 5, 1909; Assoc. M. July 381 2, 1913.) (Age 38. Born Chicago, Ill.) (A. B., Univ. of Chicago, 1905; S. B., Mass. Inst. Tech., 1908.)—June to Sept. 1907 Draftsman, Board of Superv. Engrs., Chicago

- (1) Traction, on design of track special work in connection with reconstruction of traction system: June 1908 to Feb. 1911 with Board of Superv. Engrs., Chicago Traction, as Draftsman and Designer in connection with Chicago River Tunnels and Engr. Inspector on same (Washington and LaSalle and Van Buren St. Street Ry. Tunnels and LaSalle St. Water Tunnel): Feb. 1911 to Nov. 1917 Asst. Engr., U. S. Reclamation Service, on Yuma Project, Ariz.-Cal., as Designer of reinforced concrete canal structures; Res. Engr., Colorado River Siphon, section of main canal, and a number of large irrigation structures; Designer, studies of irrigation system and pumping system for Yuma Mesa, being responsible for sections costing approx. \$1 000 000; on Rio Grande Project, N. Mex.-Tex., in charge of Las Cruces Office, layout of irrigation systems in portions of Mesilla Valley, design of large number of important canal structures, engineering and right-of-way surveys and studies on drainage canal systems, construction of telephone lines in various parts of the valley; supervision of construction and design of Leasburg Canal Extension; supervision of surveys, studies, right of way and construction of Arrey Main Canal (construction camp at Arrey, N. Mex.), also of Garfield Main Canal (camp at Garfield, N. Mex.); design and construction of number of important concrete canal structures, being responsible for work costing about \$500 000: Nov. 1917 to Nov. 1919 with American International Shipbuilding Corporation, as Asst. Progress Engr. and Progress Engr. at Hog Island Shipyard; Asst. to Mgr. of Production Ship Construction: Nov. 1919 to date Hydr. Engr., Dwight P. Robinson & Co., Inc., Peru, in charge of investigations and report on large irrigation project in Peru (150 000 acres); in New York on investigations and reports on numerous hydraulic projects; preliminary studies and plant layouts on Brazilian Irrigation Development; at Fortaleza, Ceara, Brazil, as Material Engr. in charge of receipt and distribution of plant and equipment for five large dams; at Rio de Janeiro, Brazil, Representative in charge of Rio office of Company handling administrative and financial questions involved with all Brazilian work; hydraulic studies, reports, etc., in connection with the work; Constr. and Purchasing Engr. on U. S. Embassy Bldg. and buildings for Brazilian Centennial; has had responsible connection, in various capacities, with work amounting to over \$10 000 000. (Active practice 15.9 years: Sub-Prof. work 1.8: Prof. work 14.1: Res. Ch. 10.8: Design 5.1.) Refers to E. H. Baldwin, C. W. Crockstock, H. J. Gault, L. C. Hill, L. M. Lawson, I. W. McConnell, F. L. Sellev, R. F. Walter.

STRATE, THOMAS HENRY, Assoc. M. Am. Soc. C. E.—1241 Ry. Exchange Bldg., Chicago, Ill.—(elected March 2, 1915.) (Age 44. Born Moorhead, Minn.) (C. E., Univ. of 382 Minn., 1901.)—June 1901 to date with Chicago, Milwaukee & St. Paul Ry. as follows: June 1901 to Jan. 1902 Rodman and Leveler; Jan. to May 1902 Instrumentman; May 1902 to March 1903 Draftsman in Div. Engr.'s office, Faribault, Minn.; March 1903 to Feb. 1904 Res. Engr. on construction, Faribault-Zumbrota Line, at Faribault; Feb. 1904 to Dec. 1905 Asst. Engr. in Northern Dist., maintenance and location, at Minneapolis, Minn.; Dec. 1905 to May 1910 Locating, Asst. Div. and Div. Engr., Lines Mobridge to Marmarth, and Mobridge to Aberdeen, S. Dak., in charge of locating party, preliminary and location of approx. 100 miles of Puget Sound Extension; Asst. Div. Engr. and Div. Engr. on 75 miles of same line; Div. B; Div. Engr. on reconstruction of line, Aberdeen to Mobridge (Glenham beginning of new line) (90 miles); May to Dec. 1910 Locating Engr., Big Blackfoot Ry., Mont., on surveys and construction of 25 miles of branch

line in Ovando Valley northeast from Missoula; Dec. 1910 to Jan. 1912 Asst. Engr. on maintenance in Northern Dist., at Minneapolis, Minn., miscellaneous work, surveys, estimates, reports and construction projects; Jan. 1912 to May 1915 Constr. Engr. in charge of double-track work, H. & D. Div., Minneapolis to Aberdeen, S. Dak. (287 miles), surveys and construction (approx. cost of project \$10 000 000); May 1915 to June 1918 Field Engr., Interstate Commerce Comm. valuation, in charge of field work on Puget Sound Lines and in Northern Dist. (approx. 6 800 miles), at Moberg, S. Dak., Three Forks, Mont., Seattle, Wash., and San Francisco, Cal.; June 1918 to March 1920 Valuation Engr., Interstate Commerce Comm. valuation, in charge of all field and office work in connection with inventory of property on entire system (approx. 11 000 miles), at Chicago; since March 1920 Engr. of Track Elevation in charge of grade separation work between Irving Park Blvd. and Howard St., Chicago and Evanston Div., in Chicago (cost of project approx. \$5 000 000). (Active practice 22.4 years: Res. Ch. 20.6: Design 17.9). Refers to C. F. Loweth, W. H. Penfield, W. R. Powrie, W. W. K. Sparrow, R. A. Thompson.

TYLER, JAMES, Assoc. M. Am. Soc. C. E.—4 Cecil Rd., Auckland, New Zealand.—(elected March 11, 1919.) (Age 46. Born Auckland, New Zealand.)—3 years student, Eng. 383 Dept., Auckland Univ.: 1892 to 1900 (8 years) shop practice, Geo. Tyler and Segar Bros., Engrs., etc.: 1900 to 1907 (7 years) Foreman and Structural Engr., Colonial (1) Sugar Co.'s Works, on 5-story steel building, steel bridge, steel bins, concrete piers, etc.: 1907 to 1912 (5 years) Clerk of Works and Engr. in charge of construction, Auckland City Council, Crafton Bridge (reinforced concrete, cost £35 000), electrical power station and equipment (cost £90 000), electrical power station, concrete piles and foundations, concrete chimney (cost £25 000): 1912 to 1916 (4 years) Supt. of Works, Auckland City Council, on road formation and construction in concrete, asphalt, wood block, macadam, etc., brick and stone buildings and other municipal works (cost £260 000), Supervisor, stone quarry and street maintenance (cost £200 000): since 1916 Asst. City Engr. of Auckland (5 years), municipal works, roads, drainage, buildings, quarry, destructor, baths, water-works, etc.; prepares and checks plans, estimates, calculations and reports; organizes and supervises outdoor works; from 1919 to 1920 (1 year) Acting City Engr. during absence of City Engr.: 1915 to 1924 also Cons. and Designing Engr., reinforced concrete cantilever retaining wall (16 to 38 ft. high) for S. Parker, Ltd., 140-ft. concrete chimney, Wilson's Cement Co., four reinforced concrete chimneys, Claxo Co., etc.: 1921 to 1923 Res. Engr. on Nihotupu Dam construction, completed works (excavation had been done, some concrete placed) which consisted in reorganizing plants, etc., placing concrete, valve, pile gear, etc. (total cost £197 000). (Active practice 32 years: Sub-Prof. work 14: Prof. work 18: Res. Ch. 16.3: Design 2.7). Refers to E. Crow, G. A. Lee, E. H. Rhodes, L. M. Sandston. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

TYRRELL, WARREN AYRES, Assoc. M. Am. Soc. C. E.—Merrick, N. Y.—(elected Junior Oct. 2, 1900; Assoc. M. Oct. 1, 1902.) (Age 49. Born Mexico, Mo.) (B. S. in C. E., 384 Wash. Univ., St. Louis, Mo., 1897.)—Oct. 1897 to June 1899 Instrumentman, Topographer on surveys and Asst. Engr., St. Louis, Peoria & Northern R. R. (nearly 1½ years) (1) and Mine Surveyor for Madison Coal Co. (6 months): June 1899 to April 1901 Asst. Engr., Distribution Dept. (about 9 months) and Extension Dept. (over 1 year), St. Louis Water Dept.: April 1901 to March 1902 Engr. with Christopher & Simpson Arch. Iron & Fdy. Co., St. Louis: March to Nov. 1902 with E. P. Maule, Jr., Gen. Contr., as Engr. in charge of structural design, shop drawings, mill and shop inspection of Chemical Bldg. Annex (17 stories), St. Louis: Nov. 1902 to March 1903 Engr. for structural design of large hotel (proposed) with Ernest Janssen, Archt., St. Louis: March 1903 to March 1914 Designing and Cons. Structural Engr., at St. Louis, first as member of W. A. Tyrrell Eng. Co., then of Markmann-Tyrrell Eng. Co. and later in private practice; designed building construction for architects, designed and detailed steelwork for steel companies, prepared estimates for contractors, etc.; represented Raymond Concrete Pile Co. in St. Louis territory, also the Noelke-Richards Iron Works of Indianapolis about 6 years and American Bureau of Inspections and Tests about 1 year; later did some inspection for Hildreth & Co.; Cons. Structural Engr. for Concessions Dept., Louisiana Purchase Exposition, St. Louis; about 1 year Inspector of boilers and elevators for City of St. Louis: March to Sept. 1914 designed and superintended erection of plant for Yellowstone Sulphur Co., Cody, Wyo.: Sept. 1914 to June 1917 Engr., Commercial Acid Co., East St. Louis, Ill., in charge of field and office work in connection with erection of sulphuric acid plants, sulphur burners, wedge furnaces, etc.: June to

Nov. 1917 designing zinc vapor condensers, Metallurgical Laboratories, Inc., St. Louis, Mo.; Nov. 1917 to June 1918 Office Engr. in connection with subcontractors' work on government contracts, J. Hy. Miller, Inc., Baltimore, Md.; June to Nov. 1918 Asst. to C. G. Williams, Supervisor of Purchases, Air Nitrates Corporation, New York City, checking contracts for engineering materials and equipment; Dec. 1918 to date with J. G. White Eng. Corporation, until Nov. 1922 as Res. Engr. at Nichols Copper Co., Laurel Hill, N. Y., in charge of betterments, repairs and maintenance, and since then with Structural Div. on special designs. (Active practice 26.4 years: Sub-Prof. work 1.3: Prof. work 25.1: Res. Ch. 21: Design 16.9). Refers to J. E. Allison, B. L. Brown, A. S. Crane, E. B. Fay, E. Flad, F. Kurtz, T. C. Moorshead, R. L. Rinehart, W. E. Rolfe, S. B. Russell, J. C. Travilla, J. L. Van Ornum, R. N. Whitcomb, E. G. Williams.

VAN AMBURGH, THOMAS ALBERT, Assoc. M. Am. Soc. C. E.—1703 F. & M. Bank Bldg., Ft. Worth, Tex.—(elected May 15, 1917.) (Age 36. Born Greenville, Tex.) (B. S. in 385 C. E., Agri. and Mech. Coll. of Tex., 1909.)—June 1909 to Nov. 1910 Rodman, Draftsman and Inspector, City Engr.'s Dept., Houston, Tex.; Nov. to Dec. 1910 Draftsman for (15) L. T. Peden, Houston; Dec. 1910 to July 1911 Material Clerk and Concrete Foreman, Fred A. Jones Bldg. Co., Houston; July 1911 to April 1917 Instrumentman and Asst. Engr., St. Louis Southwestern Ry. Co.; April to July 1917 private work at Oklahoma City, Okla.; Aug. to Sept. 1917 Instrumentman for Black & Veatch, at Camp Pike, Ark.; Sept. 1917 to April 1918 Gen. Foreman, Jas. Stewart & Co., on sewer lines at Camp Pike and on docks at Pig Point Depot, Va.; April to Sept. 1918 Engr. in charge of construction, Camp Beauregard, La.; Sept. 1918 to July 1919 1st Lieut., Constr. Div., U. S. Army, Camp Beauregard, construction and operation of sewer and water systems, Camp Benning, Ga., construction of water-works; July to Sept. 1919 with Dickinson & Watkins, Little Rock, Ark., on various work; Sept. to Oct. 1919 with C. H. Miller, Little Rock, on survey of Red River at Burk-Burnett (Tex.) Oil Field; Oct. to Dec. 1919 with C. M. Waters, Alexandria, La., on construction of water-works; Dec. 1919 to Feb. 1920 Supt., J. F. Valieant Co., Alexandria, on brick paving; Feb. 1920 to Dec. 1922 Dist. Engr. with E. E. Mashburn, Cotton Plant, Ark., on surveys, design and construction of road and street projects in Arkansas; Dec. 1922 to date Supt., Valieant & Toomey, Inc., Ft. Worth, Tex., on various brick paving projects in Texas and Louisiana. (Active practice 14.6 years: Res. Ch. 13: Design 8.9). Refers to D. B. Cutler, C. H. Miller, J. C. Nagle, E. J. Nichols, L. T. Peden, J. E. Pirie, C. D. Purdon.

WEEKS, GAYLORD D, Assoc. M. Am. Soc. C. E.—415 Holland Bldg., Springfield, Mo.—(elected June 24, 1914.) (Age 45. Born Mechanicsville, Iowa.) (B. S. in C. E., 1901, 386 and C. E., 1906, State Univ. of Iowa.)—March to June 1899 Rodman, and June 1899 to Sept. 1900 Instrumentman, Chicago & North Western Ry. Co.; Sept. 1900 to (14) Sept. 1902 Instructor, State Univ. of Iowa, classes in Mechanical Drawing, R. R. Curves and Earthwork, and Descriptive Drawing; Sept. 1902 to April 1905 Office Engr., Frisco R. R., at Springfield, Mo., had charge of drafting office, designed yard layouts; April 1905 to date in contracting business; from April 1905 to Dec. 1913 constructed bridges on St. Louis, Brownsville & Mexico Ry. and on Trinity & Brazos Valley Ry. in Texas, and foundations, bridges and culverts on Frisco R. R. at various points in Missouri, Arkansas, Oklahoma, Mississippi, Alabama and Texas, much of this cofferdam work with pile foundations; Dec. 1913 to Aug. 1915 construction of concrete viaduct at Tower Grove Station, St. Louis; Aug. 1915 to Jan. 1916 concrete arches for Frisco R. R. in Alabama; Jan. 1916 to April 1917 constructed three subways for Chicago, Rock Island & Pacific Ry. at Memphis, Tenn.; April 1917 to Aug. 1918 constructed concrete grain elevators at Ft. Worth, Tex., and Ft. Scott, Kans. (500 000 and 300 000 bu.); June 1918 to June 1919 constructed concrete bridges, Cotton Belt, Tex.; June 1919 to March 1920 constructed various small concrete bridges, Frisco R. R.; March 1920 to Jan. 1922 on state highway contracts, Missouri; since March 1922 constructing bridges and foundations for double-track work, Frisco R. R. in Missouri, steel cofferdams and pile foundations. (Active practice 24.5 years: Res. Ch. 18.4: Design 7). Refers to B. L. Brown, D. E. Gelwix, J. V. Hanna, F. G. Jonah, H. P. Mobberly, R. Owen.

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BERNI, ALBERT FREDERICK, JUN. AM. Soc. C. E.—925 Gasco Bldg., Portland, Ore.—(elected July 6, 1920.) (Age 29. Born Portland, Ore.) (A. B. in Civ. Eng., Leland 387 Stanford, Jr., Univ., 1917.)—June 1912 to Aug. 1913 Draftsman with Whitehouse &

Foullhoux, Archts., Portland, Ore.: summers 1914-1916 (total 1 year) Timekeeper, (12) Rodman, Chainman and Instrumentman on surveys and building construction: May 1917 to Feb. 1919 2d Lieut. and 1st Lieut., Engr. Corps, U. S. Army, pioneer troops and instruction, overseas and in United States: March 1919 to date Constr. Engr., Hurley Mason Co., Engrs. and Contra., Portland, design, estimating and supervision of construction of projects, including Olympic Warehouse for Portland Flour Mills, Hahne-man Hospital, Portland Vegetable Oil Mills Plant, gas holder foundation for Portland Gas & Coke Co., sand and gravel storage plants for Columbia Digger Co., and Hawthorne Dock Co., all in Portland, Lewiston (Idaho) Hotel (total over \$1 000 000); Engr. in charge of construction, U. S. Veterans Hospital, American Lake, Wash. (cost \$1 400 000). (Active practice 8 years: Sub-Prof. work 2.2: Prof. work 5.8: Res. Ch. 3.8: Design 2). Refers to C. D. Marx, G. C. Mason, H. A. Rands, M. E. Reed, C. B. Wing.

BROWN, HORATIO WHITEMORE, JUN. AM. Soc. C. E.—Hampton Inst., Hampton, Va.—(elected April 17, 1917.) (Age 30. Born Concord, Mass.) (S. B., Mass. Inst. Tech., 388 1915.)—Sept. 1915 to May 1917 Asst., Testing Materials Laboratory, Massachusetts Inst. of Technology: May 1917 to Aug. 1919 with U. S. Army, from Dec. 1917-July (5) 1919 overseas, 2d Lieut., Engrs.; 1st Lieut., Chemical Warfare Service from Dec. 1918; at present Capt., Engr. Sec., O. R. C., commanding Co. C, 319th Engrs.; Feb.-June 1919 at Ecole des Ponts et Chaussees, Paris: Sept. 1919 to Jan. 1920 Fellow in Civ. Eng., and Feb. to June 1920 Instructor in Mechanics, Univ. of Wisconsin: July 1920 to Sept. 1922 Engr., The Housing Co., Boston, directed numerous studies and tests of concrete house construction, during latter part of time directed cement-gun construction work of various kinds: Sept. 1922 to date Director, Dept. of Bldg. Constr., Hampton Inst., established Builders' Course and annual Builders' Conference; also on engineering work for A. F. Bemis, Boston, including design and tests of various elements of concrete buildings; in charge of design, specifications (except architectural) and supervision of construction of new dormitory unit for Massachusetts Inst. of Technology. (Active practice 5.9 years: Prof. work 5.9: Res. Ch. 3.6: Design 1). Refers to B. C. Collier, F. H. Fay, H. W. Hayward, L. J. Johnson, E. F. Miller, C. M. Spofford, F. E. Turneure.

FOGG, ALDEN KNOWLTON, JUN. AM. Soc. C. E.—U. S. Naval Station, Key West, Fla.—(elected Dec. 6, 1915.) (Age 31. Born Lowell, Ill.) (B. S. in C. E., Univ. of Ill., 389 1915.)—June to Sept. 1914 Chainman, Atchison, Topeka & Santa Fe R. R.: June 1915 to June 1917 Jun. Engr., Illinois State Highway Comm.; Res. Engr. in charge of brick, (10) concrete, macadam and earth road construction; Chf. of Party on road surveys and in office drafting, laying profiles, computing quantities and preparing bridge plans: June 1917 commissioned Asst. Civ. Engr., Lieut. (j.g.) in Civ. Engr. Corps, U. S. Navy: Aug. 1917 to May 1921 Asst. to Public Works Supt., U. S. Navy Yard, Portsmouth, N. H., had charge of erection of power plant equipment and alterations (cost about \$400 000), intake tunnel, pumphouse and foundations, marine barracks, machine shop, spar shop, hospital buildings; at various times in responsible charge as Acting Public Works Supt.: June 1920 became Lieut., Civ. Engr. Corps, U. S. Navy: June 1921 to date at U. S. Naval Station, Key West, Fla., about 3 months as Asst. to Public Works Officer, in charge of maintenance work on buildings and grounds; since Sept. 1921 Public Works Officer and Industrial Mgr., and Public Works Officer, 7th Naval Dist., in charge of completion of last third of submarine basin and breakwater (cost \$1 800 000) and construction of distilling plant (cost \$70 000); in responsible charge of all activities of Industrial Dept., Naval Station, comprising repairs to small vessels, tugs, lighters, maintenance of grounds, buildings and utilities. (Active practice 8.5 years: Sub-Prof. work 0.7: Prof. work 7.8: Res. Ch. 3.3: Design 0.2). Refers to R. E. Bakenhus, E. H. Brownell, F. H. Cooke, S. Gordon, L. E. Gregory, H. L. Hilton, A. H. Hunter.

KOCH, OTTO HERMAN SIEGFRIED, JUN. AM. Soc. C. E.—Niagara River Bridge Dept., Michigan Central R. R., Detroit, Mich.—(elected Oct. 7, 1914.) (Age 31. Born New 390 York City.) (B. E., 1912, and C. E., 1923, Cooper Union.)—June to Sept. 1911 Tracer, Cuban American Sugar Co.: Oct. 1912 to April 1917 Draftsman and Inspector with (7) G. Lindenthal, Cons. Engr., drafting for structures of New York Connecting R. R., assisting at times the Field Corps as Instrumentman and Inspector; in charge of field work for stress measurements for Hell Gate Arch Bridge during erection; detailing of panel points of Scitoville Bridge (1 550 ft. long) and designing of approaches; computing of stresses, detailing and drafting for several smaller bridges: April 1917 to date

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- with Michigan Central R. R. Co., until Oct. 1918 as Draftsman; then Detail Designer, and after May 1920 Checker detailing main connections for 558-ft. arch; investigation of stresses and connections of present cantilever bridge at Niagara Falls; calculation of primary and secondary stresses and designing of panel points of 640-ft. spandrel braced arch; designing of several railroad bridges of various types over streets. (Active practice 11.5 years: Sub-Prof. work 4.7: Prof. work 6.8: Res. Ch. 1.7: Design 6.1). Refers to J. E. Bebb, P. J. Endlick, J. E. Evans, G. Lindenthal, R. T. Robinson, E. M. Walker.
- LAUTERHAHN, OTTO, JUN. AM. SOC. C. E.—117 South Montgomery St., Trenton, N. J.—(elected April 3, 1922.) (Age 30. Born Paterson, N. J.) (C. E., Rens. Pol. Inst., 391 1917.)—July-Dec. 1917 Structural Steel Draftsman, Bethlehem Steel Bridge Corporation, Steelton, Pa., on steel bridges and buildings: Jan. and Feb. 1918 Junior Land Classifier, (4) U. S. Geological Survey, Washington, D. C., on hydro-electric power statistics: March 1918 to Sept. 1919 with U. S. Army, until Aug. 1918 as Surveyor in Engineers' School, Washington (D. C.) Barracks and general army work; from Aug. 1918 to Sept. 1919 Sergeant, Graves Registration Service, Q. M. Corps Surveyor for Unit B, from end of Sept. 1918 to Sept. 1919 in responsible charge of all surveying and construction work at American Cemetery No. 34, Suresnes, France: Nov. 1919 to date with U. S. Geological survey, Water Resources Branch, until July 1920 as Jun. Engr., New York State Dist., assisted in work of measuring discharges of rivers and canals and compiling daily flow data for publication; also construction and maintenance of staff and chain gauges, shelters for recording gauges, weirs, cableways and small bridges necessary for obtaining flow data; July 1920-July 1921 Asst. Engr., New York State Dist., on same work but for 10 months in responsible charge of Western New York work; since Aug. 1921 Asst. Engr., New Jersey Dist., on same work, being at least one-half of time in responsible charge of some of the work. (Active practice 6.2 years: Sub-Prof. work 0.9: Prof. work 5.3: Res. Ch. 3.1). Refers to E. R. Cary, C. C. Covert, H. T. Critchlow, N. C. Grover, O. W. Hartwell, J. C. Hoyt, L. P. Plummer, P. C. Ricketts.
- MOORE, JUNIUS TEETZEL, JUN. AM. SOC. C. E.—Metal Products Co., Charleston, W. Va.—(elected July 6, 1920.) (Age 28. Born Indianapolis, Ind.) (B. S. in C. E., Va. Pol. 392 Inst., 1917.)—Summers 1913 to 1917 (total 1 year) Grade Foreman and Timekeeper, Central Eng. Co., and Transltman, Kanawha County, W. Va.: Aug. 1917 to Feb. 1919 (6) 2d Lieut., Engrs., and 1st Lieut., Coast Artillery Corps, U. S. Army; Commanding Officer, U. S. Army Mine Planter Gen. E. O. C. Ord.: March to July 1919 Engr., Wm. E. Moore & Sons, Charleston, W. Va., on street paving: Aug. 1919 to Feb. 1920 Draftsman and Structural Designer, U. S. Naval Ordnance Plant, South Charleston, W. Va.: April 1920 to Sept. 1923 Designer and Asst. Bridge Engr., West Virginia State Road Comm., Charleston: Oct. 1923 to date Engr., Metal Products Co., Charleston. (Active practice 6.4 years: Prof. work 6.4: Res. Ch. 2.4: Design 4). Refers to H. R. Anderson, E. A. Bruce, R. P. Davis, C. P. Fortney, G. H. Hill, L. L. Jemison, M. J. McChesney, C. E. McCoy, P. J. Walsh.
- O'HARA, RAYMOND ANTHONY, JUN. AM. SOC. C. E.—2482 Valentine Ave., New York City—(elected Aug. 28, 1922.) (Age 29. Born New York City.) (C. E., Rens. Pol. 393 Inst., 1917.)—July 1917 to May 1918 Rodman, Instrumentman and Draftsman, New York Central R. R., New York City: May 1918 to March 1919 Seaman (2d Class) and (1) Ensign (Eng.), U. S. Naval Reserve Force; also completed course in Marine Eng. in Reserve Officers' School, U. S. Naval Acad., Annapolis, Md.: March 1919 to April 1920 Draftsman and Senior Draftsman (equivalent to Asst. Engr.), N. Y. C. R. R., New York City, in charge of surveys, plans, schemes and estimates for elimination of grade crossings; also miscellaneous railroad engineering: April 1920 to June 1921 Sales Engr., American Gas Accumulator Co., Elizabeth, N. J., sale of acetylene apparatus, such as cutting and welding equipment, lighthouse equipment, traffic and highway signals: June 1921 to date Asst. Engr., Eng. Div., Plan of New York and Its Environs, New York City, studies, reports, and designs for railroads, highways, zoning, and traffic improvements; preparation of comprehensive plan for territory included in this study (50 mile radius of New York City Hall.) (Active practice 6.6 years: Sub-Prof. work 3.8: Prof. work 2.8: Res. Ch. 2.8: Design 1.5). Refers to T. R. Lawson, H. M. Lewis, N. P. Lewis, P. C. Ricketts, G. S. Thompson, B. S. Voorhees.
- PODOLOFF, NATHAN, JUN. AM. SOC. C. E.—735 West 172d St., New York City—(elected March 7, 1921.) (Age 28. Born New Haven, Conn.) (Ph. B., Sheffield Sci. School, 394 1916; C. E., Columbia Univ., 1920.)—June to Oct. 1916 Rodman, Eng. Dept., City of

New Haven, Conn., surveying on municipal improvements: June 1917 to Feb. 1919

- (1) Asst. to Plant Engr., Wright Martin Aircraft Corporation, New Brunswick, N. J., on design, estimating and construction supervision on buildings and plant structures: June 1920 to July 1921 Asst. to Chf. Engr., The Barrett Co., New York City, design, estimating and Chf. Draftsman on buildings, miscellaneous structures and equipment for plants: July 1921 to May 1922 Structural Engr. with D. Podoloff, Archt., New Haven, structural design on buildings: May 1922 to Jan. 1924 Asst. Engr., New York Central R. R., New York City, design and estimates on general structures, buildings arches, culverts, coaling stations, etc.: Jan. 1924 to date Designing Engr., The Barrett Co., design and estimates on buildings, plant structures, and mechanical equipment and supervision over draftsman and designers. (Active practice 5.8 years: Sub-Prof. work 0.5: Prof. work 5.3: Res. Ch. 3.2: Design 2.1). Refers to S. E. Barney, R. W. Briggs, R. E. Dougherty, J. K. Finch, E. B. Lovell, J. C. Tracy, B. Wilson.

TONG, YUNG TSO, JUN. AM. SOC. C. E.—20 Tsao Chang Ta Keng, East City, Peking, China—(elected March 14, 1916.) (Age 31. Born Canton, China.) (B. S., Pittsburgh Univ. School of Eng., 1915.)—June to Sept. 1914 Draftsman in office of Morris Knowles, Pittsburgh, Pa.: Oct. 1915 to Feb. 1916 Jun. Asst. Engr. on construction of streets

- (1) and laying of sewers and sewage disposal and water supply for North Side of Peking City: March 1916 to Sept. 1917 Jun. Asst. Engr. on survey of Chuchow Chinchow Ry., successively as Chainman, Leveler and Transitman: Nov. 1917 to Dec. 1920 Levelman, then Transitman, Tientsin River Conservancy, on survey of Grand Canal: Jan. 1921 to date with Peking Suiyuan Ry. as follows: Jan. to July 1921 Acting Chf. of drafting office: July to Nov. 1921 Transitman: Dec. 1921 and Jan. 1922 on paper location and mapping: Feb. 1922 to Jan. 1923 in charge of 200 chains (20 000 ft.) of Feng Sui Sec. on construction; responsible for construction of box drain, culverts, 20-ft. span concrete bridge, and laying out of curves and heavy cutting: March to May 1923 Acting Sec. Engr. at Siahwayuan, responsible for 60 miles of maintenance; since May 1923 Engr. on new construction of Suiyuan-Paatow Line (92 miles), in charge of 10-mile section; responsible for construction of box drain, arch drain, station platform, water tanks, station building, 12- and 20-ft. span bridge and laying off curves and tangents. (Active practice 8.3 years: Sub-Prof. work 5: Prof. work 3.3: Res. Ch. 2.6: Design 0.7). Refers to G. W. Case, F. C. Hitchcock, M. Knowles, K. Y. Kwong, C. E. Lane, W. S. C. Pung, H. A. Raider, M. Sullivan, P. T. Tong, P. Y. Tsal, P. P. Whitham, P. S. Wu, P. L. Yang.

ZELTNER, EDWARD LOUIS, JUN. AM. SOC. C. E.—17 Medina Pl., Elmhurst, N. Y.—(elected March 12, 1918.) (Age 29. Born New York City.)—About 3 years (evenings)

- 396 student, special courses in engineering at Columbia Univ. and Brooklyn Polytechnic Inst.: Aug. 1913 to Aug. 1914 Draftsman, C. W. Hunt Co., Staten Island, N. Y., tracing and on working drawings, also on plans for coaling towers: May 1915 to Feb. 1916 Draftsman, Turner Constr. Co., New York City: March to May 1916 with Canadian Copper Co., Ontario, Canada, in field party on mine surveying, mine map drafting, computing and underground inspection: June to Sept. 1916 Draftsman, Ordnance Dept., Torpedo Div., U. S. Navy Yard, Washington, D. C., on range finders, torpedo tubes, etc.: Sept. 1916 to April 1919 with Turner Constr. Co. as Draftsman (8 months), Squad Boss in Eng. Dept. in responsible charge of work for construction plans of American Woollen Co.'s waste building, Pennsylvania Cement Co.'s cement mill, Nazareth, Pa., Scoville Mfg. Co., three buildings at Waterbury, Conn., and in responsible charge of work under supervision of Res. Engr. for Black Cat Textile Co.'s plant and power house at Bennington, Vt.: May 1919 to March 1920 with Berger Mfg. Co., New York City, as Designer and Estimator and preparing plans for concrete floor joist construction and steel lumber for buildings: March 1920 to June 1922 Asst. Engr. with Thomas F. Bowe, Cons. Engr., New York City, on industrial projects, all classes of structures; prepared plans, structural design, plant layouts, estimates and specifications and had supervision of work, plans and structural design for water filtration plant (cost \$50 000); assisted in preparing layouts and plans and general engineering work for sewer lines, disposal plants, pumping stations, water-works, etc.: June 1922 to date with Walter Kidde & Co., Inc., Engrs. and Constructors, as Designer on all types of industrial projects, preliminary layouts, etc.; responsible for the following: part of construction plans and subcontract details for Latham Lithograph & Printing Co., Woodside, N. Y. (approx. cost \$300 000); design, construction plans and details and all field data for alteration to factory building by installing new steel structure, 2 tiers and roof for

supporting 15 large steel tanks and wooden tanks for Klipstein & Co., Woodbridge, N. J.; design and construction plans, estimates and conferences with owners for elevator installation and many other alterations to existing 5-story loft building for Yorkmont Co., New York City; design, construction plans and all field data for moving large stone church and manse 125 ft. back from present property line for First Presbyterian Church of Newtown, Elmhurst (approx. cost \$100 000); also estimates, quantities, sub-contract prices, preliminary plant layouts, sketches, alterations, etc.; made complete plans for 4-story reinforced concrete building for C. M. Sorenson, Long Island City, N. Y. (not constructed); plans and design for large reinforced concrete factory building for Periodical Press, Paterson, N. J. (Active practice 9.8 years: Res. Ch. 5.9: Design 2.5). Refers to A. Fischer, Jr., A. B. Helser, J. F. Jung, A. B. Miller, J. R. Monaghan, E. J. Moore, J. R. Smith.

The Board of Direction will consider the applications in this list not less than thirty days after the date of its issue.

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This list is issued to members in every grade for the purpose of securing all such available information and every member is urged to send carefully such available list of qualifications and to furnish the Board with data in regard to any applicant which may affect consideration of his application. It is the duty of all members to the Profession to assist the Board in this manner.

It is especially urged, in connection with considering applications, that care be taken to be certain that a definite recommendation as to the proper grading in each case be given, inasmuch as the grading must be based upon the approval of those who know the applicant personally, as well as upon the nature and extent of his work and educational attainments. It is also suggested that the personal character or the professional reputation of an applicant should be promptly communicated to the Board. Such references should be as definitely as possible by the Board or National Association.

The Board of Direction will not consider an application from a member who has been a member of the National Association of North America within the last 100 days, and from the National Association of North America within the last 100 days, from May 1, 1917.

MINIMUM REQUIREMENTS FOR ADMISSION

Grade	Minimum Requirements	Age	Education	Experience
Student	Qualifies to receive instruction	18 years	High School	None
Associate Member	Qualified to assist in work	20 years	High School	1 year
Member	Qualified for full professional work	22 years	High School	2 years
Associate	Qualified for advanced work, and to supervise the work of others	24 years	High School	3 years
Fellow	Contributor to the permanent work of the Profession	26 years	High School	5 years

A graduation from a school of engineering or architectural education is required in each case.

Members must be at least 18 years of age at the time of admission.